## Electronic Banking Services

## International Cash Management

For Corporate Customers in Austria, Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Italy, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Turkey, Ukraine August 2013

Life is full of ups and downs. We're there for both.



# Contents

## Introduction

<b>Group Products</b>	5
MultiCash	5
EuropeanGate	8
BusinessNet in CEE	9
Austria	10
BusinessLine	10
BusinessNet	11
Bosnia & Herzegovina	13
HALCOM	13
e-ba Plus	14
Bulgaria e-Cash Bulbank Online	16 18
Croatia	20
e-Zaba Internet banking	20

4

Czech Republic BusinessNet Eltrans 2000	23 23 24
<b>Germany</b> HVB eFIN HVB globalTRXnet UC eBanking prime	26 27 28
Hungary <sup>Spectra</sup> SpectraNet	30 30 31
<b>Italy</b> UniWeb TLQ Corporate Banking	<b>36</b> 39
Poland PekaoBIZNES <sup>24</sup>	<b>41</b>
Romania <sup>BusinessNet</sup>	<b>45</b>

Russia Online banking	<b>47</b>
<b>Serbia</b> E-Bank BusinessNet Professional	<b>49</b> 50
Slovakia	52
BusinessNet	52
Slovenia	54
E-Bank	54
Turkey Banko™	56 56
Ukraine	58
iFOBS	58
Ukraine – Ukrsotsbank	60
<sup>iBank 2UA</sup>	60

Electronic B@anking	62
Systems – Overview	
EuropeanGate – Overview	64

### INTRODUCTION

Technology has become a key factor critical to keeping a competitive edge in today's business environment – this also holds true for the services you expect from your banking partner. The focus is here on products in the field of electronic banking which support the straight-through processing of transactions, the consolidation of information on a global basis and interactivity.

UniCredit offers you a range of electronic banking tools designed to give you control over the management of your money – cross border as well as cross bank – in the most sflexible way.

UniCredit has combined a number of e-banking tools with a special technical functionality which allows you to make international and domestic payments via one single point of contact/single point of entry within our bank's network.

In the following, we highlight the most important features of the range of products offered by UniCredit<sup>1</sup>.

<sup>1</sup> In the following product descriptions the neutral term "the Bank" is used instead of the bank's actual name in the respective country, which is indicated in the last section of this brochure entitled "Overview".

## Group Products

### MULTICASH

**MultiCash** is a PC-based software which enables account information to be obtained and payment transactions to be executed across all domestic and foreign accounts. It is used by more than 200 banks worldwide.

MultiCash is a modular Electronic B@nking platform based on BCS, an internationally adopted Banking Communication Standard used for fast and time-independent inter bank communication. The BCS module is the basic communication platform for individual, country-specific application modules for making domestic and foreign payments and for cash management. Furthermore there is the possibility to use moduls to generate unified formats (MT101, SEPA).

It serves as a tool for

- System administration (user level, languages, etc.)
- The control of remote data transmission
- The control of security and data signature features.

### 1. Customer profile

This product is particularly useful for companies with international operations which wish to manage all their accounts using a single software system via one single point: from the respective dial-in point, all requests are distributed to the relevant recipient countries.

#### 2. Product description

The main functions of MultiCash are included in the following application modules

Domestic Payment Module

This module supports the fast and cost-effective execution of domestic payments. Individual country modules are available for generating payment orders in the standards applicable in the respective country.

We offer modules for Austria, Bosnia & Herzegovina, Bulgaria, Croatia, the Czech Republic, Germany, Hungary, Italy, Poland, Romania, Serbia, Slovakia and Slovenia, all of which are customised in line with the local standards.

The modules are available in German, English or the respective local language. The system supports the export of userdefined electronic statements (field's delimiters can be freely defined) and provides your systems with the required data. Foreign Payment Module

This is similar to the domestic payment module in the way it is structured; it is available in German, English or the local language.

• SEPA Module

This module satisfies the requirements of the Single Euro Payments Area (SEPA) for local and cross border payments in the eurozone.

Cash Management Module

This tool tracks the development of balances (per entry and / or value date) and proposes cash management transactions.

- Further MultiCash allows for
  - Fully servicing accounts maintained at third banks: any bank using the MultiCash banking system can provide you with account information via MultiCash
  - Receiving and sending of SWIFT MT101 messages ("Request for Transfer") – the basis of efficient liquidity management
  - Receiving SWIFT MT940 (end-of-day) account statements and SWIFT MT942 (intra-day) account information
  - Creating individual templates and facilitating the administration of regular payments or standing orders
  - Distributed electronic signature
  - MultiCash@sign: This function enables authorised parties to endorse their signature (distributed electronic signature) from different locations via the Internet
- A "help" database supports errorless and rapid data entry; the online country manuals describe all the functions of MultiCash in detail. The MultiCash software can be either integrated into your computer network or, alternatively, installed on a stand-alone PC.

### 3. Security

- The use of digital signature and system certification ensures a highly secure authorisation environment. A bank parameter disk containing the user information together with the user's electronic signature is required for signing. A password is used in combination with the aforementioned for the execution of payments.
- The MultiCash system enables various categories of user restriction to be set up. When starting the program, a specific user profile determines the type of program module that the user is permitted to work with. More restrictions are possible within the program module. Additional authorisation features are configured in the bank system. This information is specified per user depending on his electronic signature type.

 The program uses the remote data transmission program MCFT (MultiCash Filetransfer) which includes data compression, high-level encryption and EBICS via Internet (TCP-IP), which is secured by server certificates and electronic signature. Enhanced transmission security is assured through certified digital "keys" providing start and end examination. Data transmission is carried out via modem/ modem or via TCP-IP (Transmission Control Protocol – Internet Protocol).

The following factors ensure a fully secured communication system

• Confidentiality

Data encryption is the basis of a secure communication system: a key is generated through a mathematical algorithm and used to encode the data to be transmitted. The RSA algorithm is used world-wide for the highest level of security key development. In MultiCash, both RSA and DES algorithm are implemented. By using the concept of symmetrical or asymmetrical encoding techniques, data security can even be provided in non-secure channels. Furthermore, data are compressed to enhance the performance rate.

Integrity & authenticity

These requirements are met by using firewalls (guaranteeing data integrity) and an electronic signature (assuring authenticity). Start and end blocks are used to identify messages and to make sure that the data transferred is intact.

A "fingerprint" is used to calculate a checksum (CHK2) of the entire file through a hash process. If the electronic signature is not correct, the communication session is interrupted immediately: a digital signature is used with every bit of information in both directions. The data as well as the signature are DES-encoded. A strict password concept is integrated into this key design as well. Any discrepancy of data during one of the numerous security checks will cause immediate transaction interruption and trigger alarm procedures.

• Non-repudiation

This is achieved by the RSA and the DES algorithms in combination with the following security components implemented at the receiver's end

- Password change in short repetition
- Diffie-Hellman key exchange after every successful communication session
- Various checks involving transaction numbers and key composition
- Online acknowledgement between client-server systems and firewall systems
- Audit trail and log file communication to ensure proper future investigation

### 4. Your benefits

- Independence of bank opening hours
- Liquidity control through display of account balances, turnover per value date and drawing possibilities
- Assistance in payment transactions and cash management on a domestic and cross-border basis
- One Single Point of Entry or multi-bank capable (with banks holding a valid MultiCash software license)
- High level of security through data encryption
- Distributed electronic signature
- Data transmission via Internet Protocol (TCP-IP = Transmission Control Protocol Internet Protocol)
- MC@sign

### 5. Technical features

• Individual workstation / network installation from DVD

### 6. Recommended technical requirements

- MultiCash runs under current operating systems
- For remote data exchange (DFUE): TCP/IP

## EUROPEANGATE

"EuropeanGate" – provides our customers with access to almost all UniCredit banks via one single point of entry. This routing and conversion platform enables the processing of both national payment formats as well as unified international formats such as SWIFT Messages (e.g. MT101, MT104) or XML (SEPA, ISO-XML, CGI).

All payment orders (bank transfers and debits if allowed) are submitted through one single point of entry using an existing e-banking channel. These are then forwarded on behalf of the customer to the executing local bank.

The following formats are supported<sup>1</sup>

- National payment formats of the account holding bank
- SWIFT MT101
- SWIFT MT104
- XML ISO 20022

Wherever necessary EuropeanGate will convert the last five aforementioned formats into the target location payment format.

### Advantages at a glance

- All accounts held within the UniCredit are accessible through one gateway
- SWIFT MT101, SWIFT MT104 and XML are automatically converted into the relevant national payment format
- Continued use of existing e-banking channel
- Continued use of existing payment templates in the relevant payment format, provided by MultiCash, SAP, Baan, etc.
- Cut-off times correspond closely to local times (recommendation: at least one hour earlier)
- One contract for all countries involved
- Customer information and support via one single point of contact for all EuropeanGate locations

### The "EuropeanGate" Concept

<text>

Network of UniCredit

### BUSINESSNET IN CEE

**BusinessNet**, the innovative eBanking solution of UniCredit, is an individual work and information platform that enables your organisation to optimally use the internet for the financial needs. It is designed to maximise efficiency and optimise the workflow in accordance with the requirements of companies across CEE.

BusinessNet follows a "multi-strategic" approach and is designed to be a "Multi-National" and "Multi-Domestic" product, representing a

- Cross-Border Solution to cover the needs of Multinational Corporate Customers with single credentials for log in (Single Log On).
- Domestic Solution, which fully covers all country specific and domestic needs.

### Access

Companies can simply access all covered countries through UniCredit local homepages. If users are authorised to use BusinessNet for more than one country and/or company, they can easily switch between them with a single "click".

### **Cash Management Functionalities in Focus**

BusinessNet is a flexible solution which is designed to satisfy needs of companies in all sizes. Providing a range of cash management functionalities it effectively supports the dynamic development of enterprises and enables optimising service operation costs and settlements between trading partners:

- Financial Overview account statements, transaction lists, real-time balances, notifications
- Payments and Collections all types of domestic and cross-border instructions
- File Transmission file import/upload for bulk payments
- Order Management efficient management of available financial orders, templates and master data
- Group Banking clear overview of all accounts of a group (multi-bank account reporting based on SWIFT MT940) including import and export functions, which enables an easy integration with a company's ERP system



### Languages & Countries

BusinessNet is currently available in both, English and in the Local Language. It is offering Cash Management functionalities in the following countries:

- Czech Republic
- Romania
- Serbia
- Slovakia
- Slovenia
- Ukraine

## Austria

### BUSINESSLINE

This electronic banking software supports the quick, easy and convenient exchange of data between the user's PC and the Bank's data processing centre using MBS/IP as a transmission protocol. BusinessLine forms the basis for the electronic handling of payment transactions and for receiving the account information of all accounts kept domestically and abroad. Furthermore, it allows communication with all Austrian banks supporting the **Multi Bank Standard**<sup>1</sup>.

The main functions include

- Execution of domestic and cross-border payments, including SEPA payments
- Data import from the customer's accounting system
- Export of various information, e.g. account statements, prepared orders, f/x-rates, Vienna Stock Exchange information etc.

### 1. Customer profile

This product is perfectly suited to both, domestic and international corporate customers who are looking for an electronic solution which can handle their banking business as well as manage all their accounts kept locally and abroad. The product can be used locally on one PC or as a network installation.

### 2. Your benefits

- The "Navigator" guides the user through a clear and welldefined structure of steps to be taken
- Streamlined solution for domestic and cross-border clearing
- Distributed signature independent of location and time possible (e.g. send payments with BusinessLine and sign them with BusinessNet)
- Security
  - User code and PIN (Personal Identification Number your personal "password")
  - TAN (TransAction Number the electronic "signature") or digital signature using a digital certificate from A-Trust (http://www.a-trust.at) or Mobile TAN (via SMS) card TAN planned for Q1/2014
  - Customised user authorisation

<sup>1</sup> MBS – Multi Bank Standard: In 1995, Austrian Banks adopted a communication standard which was set up as the basis for various Electronic Banking programs. With this standard in place, banking business can be done across different banks using only one MBS-supporting software system.

### 3. Main characteristics of this product

- Independence from bank opening hours
- Interfaces to other programs facilitate operational work
- Flexible funds management: transfers (including the costefficient "Payment in the internal market"), direct debits, cash collections, express transfers
- Based on BusinessLine, in-house cash management and financial planning functionalities can be easily set up through our supplementary BusinessCash and Business-Planner software packages
- Account statements additionally available as pdf

### 4. Recommended technical requirements

- Windows 2000 / XP
- Pentium with at least 128 MB RAM and 100 MB free fixeddisc storage
- Access to Internet

### BUSINESSNET

**BusinessNet**, the most modern web-based banking portal in Austria is an individual work and information platform that enables businesses to use the Internet optimally for their financial transactions. Make your day-to-day work easier with a comprehensive range of transactions and other banking services. Use the individual authorisation structure to organise your financial transactions flexibly, and sign your orders together with your partners whenever you like and wherever you are. Moreover, communication with all Austrian banks supporting MBS\* is possible. No hardware or software installation is needed for Business-Net. The whole communication is encoded with a 128 bit in a secure area.

### 1. Customer profile

This product is perfectly suited to both, domestic and international corporate customers who are looking for an Internet-based solution which enables them to access account information on all accounts in Austria and abroad and settle payments electronically.

### 2. Your benefits

- Worldwide, mobile and flexible access around the clock to all financial information
- Transparency: direct access to your data in real time and dialogue-oriented collaboration with the bank
- Individual, flexible structure of all access rights

- MBS: access to account information and forwarding of payment transfer orders to any Austrian bank supporting MBS, including messages from bank computers of other banks
- Financial overview and currency information: overview of all euro and foreign currency transactions (loans and deposits) at the Bank. Overview of transactions in a chart and tabular form
- Account information: account statements, lists of transactions, daily turnover on the account, balances on each value date, including transactions
- Domestic payments: template management, order overview, collective order transfer, urgent payment, internal transfer, tax payment, payment less discount, direct debit
- International transfers: template management, order overview, collective order transfer, (EU-) cross-border payment, urgent payment, banker's cheque, request for transfer (MT101)
- File transmission: upload of PAYMUL, DIRDEB and XML, retrieval of MT942, MT940, indication of data transmission protocol, download of return data carriers in CREMUL and DEBMUL format
- Current information about securities, F/X rates
- Interface to your accounting systems
- Signature management: optionally collective or distributed signature
- Confidentiality feature
- Security: User code, PIN (Personal Identification Number, your personal "password", which can individually be changed any time), TAN (TransAction Number, the electronic "signature")

### 3. Main characteristics of this product

BusinessNet is available in two versions to meet the needs of your business perfectly

- BusinessNet B@sic
  - Banking portal for small businesses and freelancers
  - Core functions: domestic and foreign payment transactions, financial overview, electronic account statements, fixed-term deposits and account activity, financing simulations, electronic securities trading, guarantee opening and amendment orders, business services such as access to the Austrian land and trade registers that consider ably simplify your daily business. Includes also the communication centre, a secure area where you can interact with your employees and the specialists of Bank Austria and make use of a joint document archive with your account manager.
- BusinessNet Profession@l
  - Banking portal for large enterprises and corporate groups
  - Core functions: enhances the payment transaction functions of BusinessNet B@sic with a summarised overview

of all of your group companies' accounts (group banking). The integrated Multi Bank Standard (MBS) which allows you to access and work with accounts at multiple banks.

 You can also import data from your internal accounting system (such as payroll and collection accounting) directly into the banking system and electronically process the letters of credit that you need for your export transactions

### 4. Recommended technical requirements

- Microsoft Internet Explorer version 5.5 or higher
- Netscape 7 or higher
- Mozilla 1.0.2 / Firefox 1.0. or higher
- Please ensure that cookies from the BusinessNet server are accepted. Use JavaScript for more comfort
- Adobe Acrobat PDF Reader™
- Some of the information and brochures that we offer for download and printing are provided in Adobe Acrobat PDF Reader™ format (PDF). You must have version 4 or higher. Acrobat Reader can be downloaded free of charge at http://www.adobe.de/
- Macromedia Flash Player™
- Some interactive content requires the Flash Player from Macromedia. You need version 5.0 or higher. If you do not wish to install the Macromedia Player, please select the HTML version. The Flash Player can be downloaded free of charge at http://www.macromedia.com/

## Bosnia & Herzegovina

### HALCOM

HALCOM is an electronic banking system developed by the Slovenian software company HALCOM. HALCOM also has a strong presence in Slovenia and Serbia as well as in Bosnia & Herzegovina.

### 1. Product description

HALCOM is a Slovenian product developed by the software house Halcom Informatikad.o.o., Ljubljana (http://www.halcom.si). The system is client-server based – the customer needs a special "client" program to communicate with the bank server. The software is very user friendly. It enables the effecting of domestic and international payments, access to an overview of the accounts, daily transactions and statements. Moreover, it allows the exchange of messages and files with the Bank using a secure channel as well as the designing of very sophisticated data exchange interfaces with the company's accounting system. The system also has a very good archiving function for sent payment orders, messages and files. HALCOM is a multibanking system and enables the management of accounts opened in all banks in Bosnia & Herzegovina which use the same electronic banking system. HALCOM permits stand-alone installations (all users use one PC under their user profile) or a network installation (users each have their own client installation on their PC's, but other users can also log in under their profile). HALCOM uses MS Access database for stand-alone installation and IBM DB2 for network installation.

Communication between the company and the Bank is possible through Internet or telephone lines (direct access to banks access point).

The user interface is very user friendly and intuitive. HALCOM therefore needs little training and helpdesk support. The distribution of new releases and patches is also very simple. Users can download new releases from the bank server and the Bank can distribute small patches directly to all customers.

### 2. Security

The security of HALCOM is based on the Public Key Infrastructure (PKI). Users of the HALCOM system each have to log in with their individual digital certificates which are stored on smart cards/USB sticks. Halcom CA, the Certificate Authority established by Halcom Informatika d.o.o., issues the digital certificates and the electronic signature keys. All banks offering HALCOM are sub-contractors of Halcom CA. A Smart Trust system is used to generate the digital certificates and the electronic signature keys. Halcom CA is the only company authorisation to issue digital certificates; it is registered with the Ministry of Information Society.

Such security architecture permits users to manage all accounts for which they have authorisation at all banks supporting HALCOM with only one smart card/USB stick. A PIN (Personal Identification Number – a personal "password") secures the digital certificate on the smart cards/USB sticks of the user. User identification is done via digital certificate locally on the customer and bank servers if data is sent or collected.

The electronic signature keys comprise 1024 bit. All payment orders, messages or files sent by the customer to the Bank or vice versa are digitally signed by the private key of the respective user or bank. The communication protocol used is similar to FTP. Moreover communication is secured through SSL encryption.

### 3. Customer profile

This product is suitable for large and medium-sized companies. It is particularly recommended for companies which hold accounts with different Bosnia & Herzegovina banks offering the same system. HALCOM fully meets the companies' requirements for a highly automated system for data exchange with the Bank.

### 4. Your benefits

- Faster, more efficient and cheaper execution of domestic and international payments
- Lower administration costs
  - Lower bank fees
  - Electronic payments (i.e. paperless)
  - Interface to the company's information system
  - Time-saving
- Forward valued payments
- Helpdesk support
- Clear review of transaction history
- Simple upgrading (download of new software release)

### 5. Advantages of this product

- Communication with some of the 18 Bosnia & Herzegovina banks
- Very user-friendly
- Time saving, independence from bank opening hours
- Payment orders are strictly checked in accordance with the rules of National Bank of Bosnia & Herzegovina
- Interfaces to other programs facilitate operational work
- Helpdesk

#### 6. Recommended technical requirements

- Windows 95, 98, ME, NT, 2000 or XP
- At least 300 MB free fixed-disc storage
- Processor 133 MHz with 32 MB RAM
- CD unit
- Free COM port or USB port (for smart card reader)
- Modem or access to Internet

### E-BA PLUS

**e-ba Plus** enables corporate clients to perform simple and sophisticated operations in domestic and international banking via Internet from the client's desk, where the client has installed all the components necessary for the functioning of Internet banking.

### 1. Product description

e-ba Plus can be accessed by our clients on a 24/7 basis. This electronic banking solution enables corporate clients to execute their domestic and international payments immediately or with a forward date for execution. e-ba Plus provides customers with information on account balances and statements. The purchase, sale and conversion of foreign currency are also possible.

The user interface is very user friendly and intuitive. e-ba Plus therefore needs little training and helpdesk support. The distribution of new releases and patches is also very simple. New versions of e-ba Plus application are distributed directly to all customers.

### 2. Customer profile

e-ba Plus is designed for resident and non-resident corporate customers.

### 3. Security

The security system guarantees a maximum of safety, protection and confidentiality.

Security is guaranteed with modern and sophisticated technologies used in Internet banking worldwide (PKI infrastructure).

e-ba Plus provides

- Verification of identity of each client
- Authentication of each client's identity using the reader, personal card or USB stick and PIN
- Confirmation of client's authorisation
- Data protection from reading or altering records during transmission of payment orders from the client's desk to the Bank

- Privacy
- Disallows possibility of neglecting payment orders already sent and received, either from the client or Bank

### 4. Your benefits

- Internet banking is available 24/7
- Operating transactions with client's desk
- Placing payment orders with the value date set forward is possible
- Option of arranging different authorisations for each user
- Lowest fees for transactions and for domestic and foreign payments
- All the options offered by Internet banking makes business simple, swift and efficient
- UniCredit Bank d.d. and the specialised firm which is under contract have set up a Help Desk service which is tasked with solving all problems and providing information to the users

### 5. Advantages of this product

- Domestic payment orders (single orders and file upload)
- Foreign payment orders
- Payment orders can be made in advance or on a chosen execution date
- Information on account balances and turnovers
- Information on orders (archives)
- The client can arrange different authorisations for employees
- Stored templates for creating orders
- Receipt of account statements
- Conversions
- Import of domestic order payments through "Offline application"
- Overview of the costs and approved limits through the BC MC card
- Saves on time and travel expenses.
- Information about loans, documentary business, EFT POS transactions and business cards

### 6. Recommended technical requirements

- Internet browser MS Internet Explorer 6.0, 7.0, 8.0, Mozilla Firefox
- Pentium class CPU, recommended RAM of 64 MB, free hard disk space of 10 MB, CD ROM drive, USB port
- Operating system Windows 2000, XP, VISTA, Win 7

## Bulgaria

### E-CASH

**e-Cash** is a PC-based software banking solution which offers customers remote access and management of their bank accounts. It enables them to receive account information and to execute payment orders in local and foreign currency.

e-Cash is a tool for use in

- System administration
- The control of remote data transmission
- The control of security and data signature features

### 1. Product description

e-Cash was introduced as our newest banking solution in 2012. It is designed to provide our customers with the best experience and ease of use for their daily banking operations. Using the latest software technologies e-Cash was designed in a modern look and with a diverse set of functionalities. It replaced the old local banking solution TeleBANK. All data is encrypted by sophisticated algorithms and access is protected by a combination of username and password and a digital certificate issued by our bank.

e-Cash provides customers with access to numerous bank products and services such as

- Opening, closing and conversion of current accounts in BGN and foreign currencies, as well as opening of deposit accounts in BGN and foreign currencies
- Money transfers in foreign currencies in favour of both local and foreign beneficiaries
- Money transfer in BGN via BISERA or RTGS system / RINGS
- Request for an authorisation of direct debit
- Currency exchange transactions and arbitration, including those at agreed exchange rates
- Exchange of free-text messages with a function which permits files attachments
- Advice of cash withdrawal of large amounts of money at the counters of the Bank

The system contains detailed information about

- Current balances of bank accounts available balances
- Account transactions full details of domestic and crossborder payments
- Updated currency exchange rates and currency rates' history
- Full list of our bank branches operating in the country
- Saving your partners' information for fast data input when creating payment orders, as well as creating templates
- List of all accounts of a customer subscribed to e-Cash

The client application is available in the Bulgarian language. In addition, e-Cash supports the export of electronic statements which can be imported directly into the customers' ERP systems.

Dedicated help desk professionals provide support with any issue; a detailed manual describes all the features and menu options.

### 2. Customer profile

This product is especially useful for medium-sized and large companies wishing to manage all their accounts via one single point and define multiple levels of data control. It is up to the company to define the number of users which are allowed to work with e-Cash and their respective rights, which include a set of accessible accounts, the right to create payment orders, the right to confirm payment orders up to certain limits, and reading of account information.

#### 3. Access

e-Cash requires an Internet connection for data exchange.

### 4. Security

- DPAPI is used for encryption/decryption operations at Local App Server in order not to maintain a separate key for the server with respective additional issues about securing this key.
- Specific data ID is stored in the database in encrypted form, and it is requested by authenticated user – so it should be decrypted to original value and passed back to the Client app.
- A unique user credential set (certificate, username and password) is being assigned to the identified named person during the registration process. User passwords stored one-way encrypted.
- Secured network infrastructure is implemented by the Bank. New components feature encrypted traffic between application tiers and SSL.
- Sensitive data is stored, sent over network and logged in encrypted form. A specific scheme is applied to protect sensitive data in the local database. Not all database tables and fields are being encrypted but only sensitive data – account balances, payments, etc.

The following features have been implemented in e-Cash to ensure a fully secured communication system

• Confidentiality

Data encryption is the basis of a secure communication system. The customer provides the necessary personal information and defines the user rights required. The personal data for each user is registered on the server application where it is matched with a digital certificate installed on the client computer and issued to each defined user by the Bank. A public key is saved on the central system server. No copy of the private key is kept in the Bank. In the case of revocation, loss or theft of ID, the public key is transferred to a deny list. A new certificate is generated.

• Integrity & authenticity

These requirements are met by using firewalls (guaranteeing data integrity) and electronic certificate (ensuring authenticity). The data is encrypted by the customer certificate and the communication channel is encrypted by a session key.

### • Non-repudiation

This is achieved by using Microsoft RSA certificates. Our bank applies e-Cash digital certificates issued by the Bank. In addition the following security components are available

- Each user is required to change his/her password every 60 days.
- The application logs and the database is encrypted and kept on the customer's server. The customer is provided a way to extract the logs in encrypted files for future troubleshooting by the Bank's specialists
- Various checks involving transaction numbers and key composition
- Online acknowledgement between client-server systems and firewall systems
- Audit trail and log file communication to ensure proper future investigation

### 5. Your benefits

- Independence of bank opening hours
- Liquidity control through display of account turnovers and balances
- Assistance in payment transactions and cash management on a domestic and cross border basis
- High level of security through data encryption
- Distributed electronic signature
- Data transmission via Internet protocol (TCP-IP = Transmission Control Protocol-Internet Protocol)

### 6. Technical features

e-Cash application works offline and in order to exchange information with the bank, the customer initiates a synchronisation process. The server module then sends all the information which was entered by the customer, through the client module, to the bank server and received the information chosen by the user. e-Cash supports 32-bit and 64-bit Microsoft Windows platforms.

#### 7. Technical requirements

The minimum hardware requirements are

• For 32-bit operating system: 1GHz or faster CPU (recommended 2GHz or above), minimum 1024 MB RAM (recommended 2 GB or above).

- For 64-bit operating system: 1.4 GHz or faster processor (recommended 2GHz or above), minimum 1024 MB RAM (recommended 2 GB or above).
- Some of the software packages used by the e-Cash are installed directly to the Windows system – minimum 5GB free on the system disc "C:\".
- e-Cash operates under Windows XP SP3 or later.

### **BULBANK ONLINE**

**Bulbank Online** is the Internet based banking solution offering our bank's private and corporate customers remote access and management of their bank accounts. It enables them to receive account information and to execute payment transactions in local and foreign currencies. Bulbank Online is a sophisticated tool for execution of domestic and foreign payments and for cash management.

### 1. Product description

Bulbank Online was introduced in our bank in June 2004. It is available both in Bulgarian and English.

Bulbank Online's functionality covers the following products and services

- Domestic payments
   Execution of fast and cost-effective payment transactions in local currency in accordance with the country standards:
  - Payment orders in local currency standard, urgent, taxes and insurances
  - Direct debits
  - ayment orders under budgets (incoming/outgoing)
- Cross-border payments

The tool supports execution of payments orders in foreign currency as well as the option of receiving SWIFT copies of all incoming/outgoing bank transfers. Currency exchange is also available, at agreed rate.

Cash Management modules

Buldirect and Bulcollect are an essential part of Cash Management which is offered to corporate customers. These products are also accessible via Bulbank Online.

The system provides the following information

- Balances daily, yearly and aggregated, timing of the last transactions on the accounts
- Available balances, BORICA balances showing overdraft facilities, blockages etc.
- Movements and turnovers on the Bank accounts

- Account transactions full details for domestic and international payments
- Updated currency exchange rates
- Detailed list of contacts for domestic and international payments
- Notifications tailored to customers' needs, with a predefined frequency or upon movement, submitted via e-mail.

Furthermore, the system supports the import and export of user defined payment data – in MS Excel, txt or XML format (for date exchange with other ERP systems).

Dedicated help desk experts support errorless and rapid data entry; the interactive help on screen describes all the functions of Bulbank Online in detail.

### 2. Customer profile

This product is particularly useful to companies with international operations wishing to manage all their accounts via one single point. It is up to the company to define the number of users permitted to work with Bulbank Online and their respective rights, which includes a set of accessible accounts, the right to create payment orders, the right to confirm payment orders up to certain limits, and the reading of account information.

### 3. Access

Bulbank Online is accessible via Web and mobile phone.

### 4. Security

Access to the system via the Internet is secured by a personal user name and password. However, a digital certificate is required for the execution of payment transactions. Bulbank Online supports the use of both digital certificates for universal electronic signature, issued by companies registered in Bulgaria in accordance with the law on electronic documents and electronic signatures, or digital certificates issued by our bank and dedicated for use only with Bulbank Online. Also a SMS password can be requested upon log-in and SMS notifications can be sent at execution of outgoing payments and received incoming transfers. Apart from secure access to Bulbank Online, the information architecture on which the system is based is also secured in accordance with the best world practices. Payment orders are signed by the customer by means of digital certificates, the validity of which is checked by Bulbank upon receipt for execution.

The following features are implemented in Bulbank Online to ensure a fully secured communication system.

Confidentiality

At registration, the customer defines the account numbers to be subscribed and the access rights. It is possible to

allocate rights to additional users (proxies) to be set up with a predefined level of access either with respect to information (available balances, movements, payment orders) or payment rights relating to specific accounts. Our bank offers its corporate customers the ability to use multisignature combinations for payment orders, as well as a variety of authorisation rights for payment orders from certain accounts or for certain amounts.

### • Non-repudiation

This is achieved by the use of a personal user name and password. Payment orders can only be authorised if the user holds a personal digital certificate.

Accuracy & speed

Accuracy and speed are achieved through transactions being executed in real time within our bank. All payment orders are processed promptly upon their receipt, taking account of stringent compliance with all legal requirements and banking practice rules. Payments with a future value are also accepted.

### 5. Your benefits

- Remote control, including from abroad, thus achieving independence of bank opening hours
- Liquidity control through display of account turnover and balances
- Assistance in payment transactions and cash management on a domestic and cross-border basis
- High level of security through personal user name and password
- Use of electronic certificates for authorisation of payments

### 6. Recommended technical requirements

The following web browsers are supported by Bulbank Online:

- Microsoft Internet Explorer version 8.0 or higher
- Mozilla Firefox version 6 or higher

## Croatia

### E-ZABA INTERNET BANKING

**e-zaba** is an integral application designed for resident and non-resident corporate customers.

It is a cost-effective and complete solution enabling corporate customers to execute financial and non-financial transactions, as well as contract certain banking and nonbanking services via Internet, by using an authorisation system based on two-factor authentication by USB Key or smartcard and digital cerificates.

### 1. Product description

e-zaba internet banking is a proprietary (in-house developed) application introduced in 2001. The access to customer accounts is available on a 24/7 basis. This internet banking solution has a broad range of financial and non-financiral functionalities, enabling corporate customers to execute domestic and international payments and forex transactions. Furthermore, e-zaba provides customers with up-to-date account information, quarterly interest rate reports, reports for Point of Sale, monthly reports on account balances and activities.

#### 2. Customer profile

e-zaba is designed for resident and non-resident corporate customers. It is suitable for all types of business clients, from large corporates to mid-size and small enterprises as well as for the craftsmen. With e-zaba corporate customers can process their transactions comfortably, quickly and effectively. e-zaba can be used on all available PC platforms because it supports Windows, MAC and LINUX operating systems.

### 3. Security

The security systems through protection technology are implemented to guarantee the following

- User authentication
  - at logon, which includes user ID verification (identity checking) and user authorities verification (user authorisation) and
  - at digital signature validation checking
- Data protection during transmission to and from the Bank
- Data integrity
- User privacy
- Non-repudiation

The configuration of security infrastructure can be divided into the following functional parts

### Firewall and intrusion detection systems

Two types of firewalls are used

- Pass-through firewall in failover configuration is used as primary protection of the Bank's IT system
- Proxy firewall in failover configuration divides security infrastructure from the internal network

### Authentication systems

Web proxy is the central part of security infrastructure, which provides session break, enforcing security policy and creation of single web space. It also enables load balancing and high availability for all web servers in the web space.

Different levels of security are in use

- SSL over X.509 (protection for e-zaba application and certificates on SSCD)
- HTTP (public web server)

During SSL handshake (encryption with 128-bit symmetric key), the web proxy checks

- Certificate expiry date
- Certificate publisher (Certificate Authority the Bank is Certificate Authority)
- Validity of user's key pair (public, private)
- Certificate Revocation List (CRL).

As additional protection of data integrity, digital signature is used. Digital signing of HTML forms and files as well as validation checking of digital signature is performed through use of software suite. Every transaction is digitally signed with private key (resides on SSCD) and digital signature is validated on the server side.

### Management systems

Based on PKI (Public Key Infrastructure), using digital certificates (1024 bit) on SSCD. The registration process takes place on customer's side to provide non-repudiation.

The enrollment process starts when the customer is opening services in the Bank. Therewith the Bank delivers the package to the particular customer, which contains SSCD, along with all needed drivers and smart card management applications. In the course of user data entry, temporary credentials are issued to the customer for the enrollment and registration process.

After the initial software installation, the user generates the key pair on SSCD. The private key never leaves the SSCD which guarantees non-repudation, while the public key is part of the user certificate request, which the user sends to the Bank via Internet (SSL protected). Once the certificate is generated and published on LDAP server, the customer can use e-zaba Internet banking.

### 4. Your benefits

- Cost-effective and complete solution for payment, financing and investment
- Can be used independently from the PC platform you have – supports Windows, MAC and LINUX OS
- Full control over financial operations through various levels of user authorisations – customer defines authorisations depending on its requirements and business processes
- Prompt account information (account balance overview, statements, activities) including filter functionalities allowing highly transparent account management
- Possibility of integration with customer's IT systems (SAP, Navision, etc.)
- To faciliate the use and significantly reduce the time, the payment order can be filled out by using templates
- Templates saved in e-zaba are also available via m-zaba business banking
- English and Croatian language versions
- No maintenace and no training requirements
- Software download and automated software update via the Internet

### 5. Advantages of the product

- Brand new feature unique on Croatian market incorporates the use of e-zaba and e-Invoice service
- Incorporates the use of e-zaba and eGovernment services such as value added tax reports, registry of annual financial and statistical reports, solvency information, pension insurance contribution reports, etc.
- The payee display can be used for saving data on business partners / suppliers in favour of whom payments are most frequently made
- Quick menu enables quicker and simpler approach to the most used links
- Possibility of choosing the position of the main menu four options are available
- Access to useful contacts such as contact information of business relationship manager and other important telephone numbers and e-mail addresses for contact with the Bank
- State-of-the-art security system

### 6. Recommended technical requirements

### Windows OS

- Internet access via web browser Internet Explorer 7.0, 8.0, 9.0 32-bit and 64-bit or Mozilla Firefox 19.0+
- Standard PC with Microsoft platform Windows XP, Windows Vista, Windows 7, including servicepacks
- Java Plug-in for Oracle JavaSE, version 1.7 update 17 or more
- 200 MB space available on hard disc
- CD-ROM unit
- Free USB port

MAC OS X

- Internet access via web browser Safari v6.0.2+ or Mozilla Firefox 16.0+
- Apple PC with MAC OS X platform MAC OS X 10.7 (Lion)
   Intel 64-bit, MAC OS X 10.8 (Mountain Lion) Intel 64-bit
- Java Plug-in for Oracle JavaSE, version 1.7 update 17 or more
- 200 MB space available on hard disc
- Free USB port

### LINUX OS

- Internet access via web browser Mozilla Firefox 10.0+
- Ubuntu 12.04, 12.10 (32-bit), Red Hat Enterprise 5.7, 5.8,
   6.1, 6.3 (32-bit and 64-bit) or SUSE Linux Enterprise 11 (32-bit)
- Java Plug-in for Oracle JavaSE, version 1.7 update 17 or more
- 200 MB space available on hard disc
- Free USB port

# Czech Republic

### BUSINESSNET

BusinessNet is an Internet banking service which caters to the sophisticated needs of corporate customers. To manage corporate accounts using BusinessNet, all the customer needs is access to Internet, an Internet browser and an electronic security token independent of the computer.

### 1. Product description

Browser based, online Internet banking offering convenient and secure access to banking services.

BusinessNet is available in two versions

- BusinessNet Basic Internet banking for corporate clients
- BusinessNet Professional Internet banking for corporate clients with specific needs in the area of Cash Management (e.g. receipt, display and export of statements of accounts kept at other banks MT940/942)

### 2. Customer profile

BusinessNet products – BusinessNet Basic and BusinessNet Professional – are designed to satisfy the needs of all types of business and corporate clients, i.e. business clients, small and medium- sized enterprises and large corporate clients.

### 3. Security

- The pocket electronic safety key independent of the computer is required for the login and authorisation of transactions
- Possibility for multiple authorisation of payment orders using structured signature authorisations at the account level
- Flexibility in setting user rights at the account level

#### 4. Your benefits

- Possibility of accessing the system from anywhere without the need for a fixed software installation
- Possibility of unlimited collaboration and data-sharing between the service users, regardless of their geographic locations (e.g. checking, correcting, signing of payments)
- Online information on connected accounts
- Multi-country single sign on allowing the user to use unique user ID and electronic security token across five countries (CZ, RO, RS SI, SK)

#### 5. Advantages of this product

Basic functions – active transactions

 Uploading of domestic and foreign payment orders from a file created by the accounting system and convenient subsequent processing of those payment orders

- Submission of domestic payment orders (standard payments, fast payments, express payments, collection requests, transfers between accounts access for which the user is authorised, standing orders, collection authorisations)
- Submission of foreign payment orders (standard payments, Euro payments, SEPA CT, standing orders)
- SEPA dd authorisation
- Term deposits
- Trade finance

### Basic functions – passive

- Current account balances with the possibility of aggregation
- Transactions history
- Statements of accounts kept with our bank, with the possibility of exporting to the accounting system
- Statements of accounts kept with other banks, delivered through MT940/MT942, with the possibility of exporting to the accounting system (BusinessNet Professional only). PDF documents related to the customers accounts – account statements etc.
- Cash Management function overview of closing balances on accounts kept with the Bank and of accounts kept with other banks, with a possibility of aggregating the balances (BusinessNet Professional only)
- Possibility of according access to accounts held by multiple business entities to a single user (utilising a single access profile and security calculator), with a high level of user comfort
- Possibility of establishing structured signature authorisations (including use of transaction limits) at the account level
- Great flexibility in setting user rights at the account level
- Possibility of creating payment order templates and databases of business partners and sharing them with other users
- Possibility of setting up e-mailing based on precisely defined parameters
- Wide range of options for customising the service favourite pages, designating of a preferred account, etc.
- Possibility of exchanging messages between the Bank and user
- Archiving of payment orders list of authorised (signed) transactions submitted to the Bank for processing
- Information on payment cards
- Information on securities

### 6. Recommended technical requirements

### BusinessNet in PC:

- Operation system: MS Windows XP, Vista 7; Mac OS X 10.0 and higher
- Internet browser: Microsoft Internet Explorer version 7.0 and higher, Mozilla Firefox 3.0 and higher, Google Chrome 4.0 and higher, Safari 3.0 and higher
- Screen resolution: 1024 x 768 font size normal (Windows)
- JavaScript: enabled
- Session cookies: enabled
- Java: optional for greater convenience in uploading data from the accounting system: Java enabled, applet version MS Java or JDK 1.4
- Other: Adobe Acrobat Reader 6.0 and higher

BusinessNet in mobile device:

- Operation system: Android, iOS, Blackberry OS, Symbian S60<sup>1</sup>
- Internet explorer; native explorer of OS Android and iOS, alternatively Opera Mini<sup>2</sup>, Opera Mobile<sup>2</sup> Notice: Business-Net in mobile phone works properly only if the JavaScript is supported by the internet browser

### ELTRANS 2000

**Eltrans 2000** is a new-generation electronic banking tool which meets the demands and requirements of domestic customers for an information and payment channel.

### 1. Product description

Eltrans 2000 is a Gemini 5 multibank application. The system's advantage is the ability to switch flexibly between Czech and English setups. Eltrans 2000 also offers features for setting automatic communications with the Bank, real-time system updates, data transmission also via the Internet with a TCP / IP or HTTP protocol and other operations.

### 2. Customer profile

Eltrans 2000 is perfectly suited to domestic corporate customers.

<sup>1</sup> the alternative browser is recommended to be installed

 $^{\scriptscriptstyle 2}\,$  in these browsers couldn't be used all the functions

### 3. Security

The extent of user authorisation for working with the Eltrans system is defined precisely by the client's administrator (exactness relates to individual types of payments and is set to hundredths of the selected currency). During the transmission, the data are protected by special algorithms DES/RSA. For the purpose of self-authorisation, a client also uses specifically created access certificates. It is thus possible to easily identify several users within one company. A user can log on the Eltrans system in three ways: through a user name and password, his digital certificate or through using his access password to log on to the internal PC network (the most suitable option will be selected by the company's administrator).

### 4. Your benefits

Basic functions – active transactions

- Uploading of domestic and foreign payment orders from a file created by the accounting system and convenient sub-sequent processing of these payment orders.
- Submission of domestic payment orders (standard payments, express payments, direct debits, standing orders, direct debit mandates).
- Submission of foreign payment orders (standard payments, Euro payments, SEPA CT, standing orders)
- SEPA DD authorisation
- Term deposits
- Trade finance

Basic functions – passive

- Information on balances and turnover on all agreed client's accounts
- Information on turnovers not posted
- List of all payments removed from processing
- Exchange rates refreshed on a daily basis
- Information on interest rates
- Information on time deposits opened
- Information on all standing orders created
- Information on consents created to direct debit
- "Registered" mail in free text form
- Information received can be easily printed or moved to other client's program (accounting software, program in MS Windows, etc.)

### Eltrans@Sign

This function enables authorised parties to endorse their signature (distributed electronic signature) from different locations via the Internet.

### 5. Recommended technical prerequisites

- PC Pentium / 133 MHz, 32 MB RAM (access db)
- PC Pentium / 166 MHz, 128 MB RAM (sql db)
- Windows 2000 SP3 and SP4, XP, Vista, 7
- Windows 2000, 2003, 2008 Server/Terminal Services (only in connection with MS SQL Server, or Oracle)
- Internet Explorer 5.5 or higher
- Other important components are included in the installation package of the application

## Germany

### HVB EFIN

**HVB eFIN** is an electronic banking software solution from HypoVereinsbank based on the German FinTS standards (Financial Transaction Services) and multi-bank compatible. Clear design and uncomplicated operation ensure that payment order administration is clearly presented. With HVB eFIN, customers can process their business transactions comfortably and quickly.

### 1. Product description

HVB eFIN is a user-friendly electronic banking software solution which is simple to install and requires minimal maintenance. It has a broad functional range, enabling the customer to process domestic and international payments (including SEPA) and to access up-to-date account information.

### 2. Customer profile

HVB eFIN is suitable for business and corporate customers who want to process daily payment transactions for their German-based business accounts simply and cost efficiently.

#### 3. Security

HVB eFIN uses a high-security process based on FinTS technology standards and the electronic signature. FinTS is a common online banking standard developed by the German Banking Industry (Deutsche Kreditwirtschaft, former ZKA) which defines the data transfer between the banking software and the bank. The standard uses modern cryptographic security algorithms to effectively protect against hacker attacks. Authorisation and release of money transfers are effected via chip card or data file (USB).

With the support of the banking signature card ("Bankensignaturkarte"), FinTS offers the highest possible level of security for online banking.

### 4. Your benefits

- Convenient to use, simple installation and low maintenance
- User-friendly and easy to use for quick entry and efficient execution of daily payment transactions
- Broad but manageable programme for organising payment transactions:
  - Multi-bank compatible (FinTS is supported by more than 2,000 German banks)
  - Overview over the financial status on the individually adjustable home page

- Up-to-date transactions (interim transactions)
- Transaction ticket management (online approval of transaction tickets)
- Distributed electronic signature
- Fully SEPA-ready: Supports all relevant SEPA payment orders (SEPA credit transfer, SEPA direct debit, SEPA standing order etc.) in the respective current format
- Import and export feature for facilitating data comparison with accounting programmes
- Foreign payments (in DTAZV format)
- Urgent payments
- Account overview for securities portfolios

### 5. Recommended technical requirements

- PC Pentium class with Internet access or better
- Microsoft<sup>®</sup> Windows XP/VISTA/Windows 7 including current service packs
- Recommended min. screen resolution of 1200 x 1024 pixels
- Banking signature card and chip card reader or USB slot (depending on the security process used)

### HVB globalTRXnet

HVB globalTRXnet has been developed to process and expedite large domestic and international payment transfers swiftly and safely via the Internet. In addition, the customer can calculate balances by value date, receive statements and advices of account, as well as open and manage import letters of credit.

### 1. Product description

HVB globalTRXnet is an electronic banking solution which provides prompt account information with booking and value date balances. Furthermore, transferring funds which have been generated directly out of a customer's financial accounting system and also entering and transmitting domestic and international transfer orders is also possible.

### 2. Customer profile

HVB globalTRXnet provides electronic funds transfer and cash management for all types of companies via the Internet. It is suitable for companies which wish to transfer large volumes of money, both within Germany and from abroad.

### 3. Security

Maximum security is guaranteed through the use of the electronic signature with state-of-the-art data encryption in accordance with ZKA standards. The authorisation and the

release of payment transfers is effected via a chip card (the "SmartCard").

### 4. Your benefits

- Cost-effective and complete processing of payments; assistance in reporting to the Central Bank
- Prompt account information with allows for highly transparent account management
- Cash management functions support liquidity planning (account and advice statements, calculation of balances by value date)
- Quick entry and transfer of domestic and foreign transfers orders (Formats DTAUS, DTAZV, MT101 etc.)
- Export of transaction volumes and account balances in freely definable processing files (ASCII files)
- Fast and safe transfer of large volumes of money (files up to 1 GB)
- Express funds transfers; standardised euro funds transfers
- Opening and management of import letters of credit
- Distributed electronic signature for the authorisation of money transfers by persons situated in different locations (alternatively with the chip card)
- Recording of SEPA transfers, transfer of SEPA files
- SEPA payments with Credit Transfer and Direct Debit
- Support of the EBICS Internet standard
- Integration of several banks possible
- Cost and time-effective administration of your import letters of credit; prompt information about the letter of credit's status.
- Customised access rights for each user
- Automatic transfer and processing of account information and electronically generated domestic and foreign payment orders into the customer's financial accounting system
- User-defined data selection with print-out as PDF file
- English, German, Spanish and Italian language versions
- Simple installation, minimal maintenance and training requirements
- Software download and automated software update via the Internet

### 5. Recommended technical requirements

- Internet access via standard web browser (Internet Explorer 6, 7 or 8, Mozilla Firefox 3.0.x, 3.5.x.)
- Standard PC with Microsoft platform (Windows 2000, Windows XP, Windows Vista, Windows 7 incl. servicepacks)
- Java Virtual Machine (SUN, version 1.4.2\_x, 1.5.0\_x, 1.6.0\_x
- Floppy disk / USB stick or banking signature card for storing the signature key
- Chipcard reader (Kaan Professional, Reiner SCT (Cyber Jack), alternatively SigAPI-compatible chip card reader
- Adobe Acrobat Reader

### UC EBANKING PRIME

**UC eBanking** prime from UniCredit is multi-bank compatible and designed to accommodate the latest domestic and international payment standards. The entire solution was developed in house (UniCredit Bank AG), and our IT specialists have built on the expertise they incorporated into the predecessors also by integrating customer input into this software system.

### 1. Product description

Unlike many other electronic banking applications, UC eBanking prime is not portal-based. Today and in the future, your banking details will be stored on your company's own systems. This feature is based on the UC eBanking prime server, which is installed on your Intranet as a web application. What this means in practice is that, once the application has been installed, all authorised workstations across the company can access the system, wherever they are located. The software can even be linked up with the company's ERP System. Communications with and data transfer to banks use the secure, web-based EBICS transfer process, which is standard throughout Germany.

### 2. Customer profile

This product is particularly useful for companies with international operations which wish to manage all their accounts with one software system via one single point: easy set-up within the local network of the customer, with a clear client/ server architecture and a central data basis.

### 3. Security

With UC eBanking prime all your data remains where only you have direct access to it: in your company. Based on this home environment, we design your individual solution to offer optimum security coupled with operational convenience.

- Unlike portal solutions, your data and the application are stored on your own systems.
- In line with this concept, all information and objects are held in UC eBanking prime, i.e. all payment transaction data and all bank account information are stored on your local database rather than on the bank's systems.
- Company-internal communications take place over the Intranet and can be encrypted if desired.
- As regards access authorisation hierarchies, we can adapt the program to your company's system for assigning responsibilities as well as to your individual security requirements.
- All communications with the bank are encrypted in accordance with the latest security standards.
- If desired you can add another security layer by using your bank signature card

### 4. Your benefits

- Fully automated import of national and international payment data from your accounting system, and subsequent submission of the data for electronic signature and automatic transmission.
- Flexible, timer-controlled retrieval management with downstream, fully automated export function in either standardised or freely definable formats.
- Transmission of any desired external data, including structured displays for the SEPA, IZV, DTE, AZV, EUE, ESU and MT101 formats.
- Distributed electronic signature (DES) compliant with EBICS.
- Confidential SEPA and domestic payments.
- Automated cleanup function.
- Up-to-date account information (account summaries, statements, movements, notifications and value-date balances) plus search and filter functions.
- Records of:
  - EuropeanGate payments (see EuropeanGate section)
  - Standard formats (IZV, DTE, AZV, EUE, ESU & MT101).
  - Logging functions.
  - SAP<sup>®</sup> link.
  - Security-oriented differentiation of administration by means of a superordinated audit role.
  - Configurable hash value display for imported payments with various hash processes.

### SEPA Features

SEPA information

- Processing and display of camt statements and messages (camt.053, camt.052)
- Overview and detailed view (camt.054) within the camt turnover SEPA conversion tools
- Conversion of existing IZV master data in accordance with SEPA standards
- Conversion of DTAUS files during the upload process
- IBAN and BIC converter
- Support for SEPA version 2.7 from 4 November 2013 SEPA mandate management
- Fully integrated entry and management of SEPA mandates
- Collated digital storage of scanned (signed) mandate letters
- Import mandates from transaction files (using DTAUS or SEPA) or CSV
- Export mandates to create a mail merge and print forms
- Comprehensive administrative options as regards status, due date, etc.
- Transfer of mandate details to debit memos (even when altered)
- Mandate history of modified data SEPA payments
- Manual registration of SEPA transfers (standard and preferred) as well as urgent XML and SEPA direct debits (B2C, B2B, COR1)

- Target calendar for periodic payment orders AWV<sup>1</sup> reports
- AWV report management for Z4, Z8 and Z10 reports
- Creation of AWV reports from payments

### 5. Recommended technical requirements

For the operation of UC eBanking prime, both for the server as well as for the individual workstations that access the server, there are certain minimum technical specifications required. The following system specifications specify the minimum requirements for the normal and average use of the software. Depending on the intensity and type of use, certain elements may need to be improved on a case-by-case basis. For the installation or update and migration it is necessary to have the appropriate administration permissions, as before.

### UC eBanking prime SERVER

- Windows XP Professional, Vista, Windows 7, Windows 8, Windows 2003/2008/2008 R2 Server
- minimum 2 GHz Processor, 2 or more Cores are recommended
- Main memory
  - minimum 2 GB free RAM (32Bit Installation)
  - minimum 3 GB free RAM (64Bit Installation)
- minimum 5 GB free hard drive space (depends upon the respective customer demands & needs)
- NTFS file system (for the database installation)
- Free hard drive space for user data (depends upon the respective customer demands & needs)
- Oracle Java Runtime Enviroment (JRE)
  - Java SE 7u13
- CD-ROM/DVD drive for installation
- USB-Stick for the storing of the user keys. (As an alternative: hard drive, network, or disk drive)
- An internet connection for the communication through EBICS/MBS
- LAN-Access for the connection of the work-stations to the server

### UC eBanking prime WORK-STATIONS

(No separate installation of UC eBanking prime is required)

- Windows XP Professional, Vista, Windows 7, Windows 8, Windows 2003/2008/2008 R2 Server
- minimum 512 MB RAM
- Oracle Java Runtime Enviroment (JRE)
- Java SE 7u13, or
  - Java SE 6 Update 39
- USB-Stick for the storing of the user keys. (As an alternative: hard drive, network, or disk drive)
- For Smartcard use: Card Reader with included ZKA Sig-Api Support
- LAN-Access for the connection of the work-stations to the server

- Webbrowser (Java-Script must be active)
  - Microsoft Internet Explorer 8 on XP (with restrictions<sup>2</sup>)
  - Microsoft Internet Explorer 9 on VISTA and Windows 7
  - Microsoft Internet Explorer 10 on Windows 8
  - Mozilla Firefox 18.0.2 / 17.0.2esr
  - Google Chrome v24.0.1312.57 m

<sup>1</sup> German foreign trade regulations (= Außenwirtschaftsverordnung)

<sup>&</sup>lt;sup>2</sup> Restrictions for Microsoft Internet Explorer 8: Microsoft Internet Explorer 8 is not anymore state of the art, therefore it may support some components used within UC eBanking prime (e.g. JavaScript, CSS, ...) only insufficient. That may cause variations in design and reduced processing times, especially in combination with aged/weak hardware components.

30

# Hungary

### SPECTRA

The **Spectra** electronic banking software provides an easyto-use electronic interface for the corporate customers of the Bank. It enables customers to obtain information on their accounts and send orders to the Bank using a PC with modem via a simple phone line. This product is offered by the Bank, along with MultiCash.

### 1. Product description

With the assistance of an installed Spectra client program, the customer can take care of his banking needs any time via his computer without having to go to the branch office in person. Spectra is available in Hungarian, English or German language and enables the customer to make his payment transfers as well as request real time information on his account balances and movements. The application provides a possibility for automated interfacing with a company's accounting system, whereby high volumes of orders can be imported respectively exported.

### **2. Major services provided by the system** Submitting orders:

- HUF and FX transfers
- direct debit orders
- postal cash payment orders
- batch transfers and direct debit
- creating and cancelling deposits

### Query options:

- current account balance
- account statement with possibility of downloading (even in certified PDF format)
- account history dated back to the opening of the account
- exchange rates and interest conditions

#### Other operations:

- cash delivery orders
- announcing cash withdrawals
- ordering the issue of coverage confirmation or bank information
- retrieving loan information (HUF/FX)

Sending free-format letters:

• orders can be send to the bank in an unstructured format

### 3. Customer profile

The product has been offered to corporate clients to support them in handling the special features of the Hungarian financial market. The product is therefore specifically suited to the requirements of the Bank's corporate customers.

Along with the Spectra client program, a simpler program with reduced functionality, named Spectra Light, is available for small enterprises and private customers.

### 4. Your benefits

- Real-time enquiries
- Simple method in respect of user rights which covers the different authorisation schemes of corporate customers (point system)
- Multi-site support: "post-box" to support the signature of an order on different installation sites
- Data exchange with external account keeping or ERP systems (e.g. SAP)
- Three languages are supported (Hungarian, German, English)

### 5. Reliability

- Protection against payment order "loss" in the event of a breakdown of the communication line
- Enquiry of the execution status of orders sent

### 6. Security

- Encryption of the communication line and the local files in accordance with the Advanced Encryption Standard
- Public key method in the encryption of communication to provide different keys for each login
- RSA algorithm protects the stamp of digital signatures on payment orders
- The user rights are controlled on the bank server's side; there is no possibility of changing them in the customers program
- Spectra is a password-based system which implies that different passwords are given to each user to login and to sign orders

### 7. Recommended technical prerequisites

- At least Windows XP SP2 or higher operating system
- At least 100 MB free hard disc storage
- Pentium with at least 128 MB RAM
- CD-ROM drive for installation
- Active dial-up modem (normal or ISDN) or Internet connection

### 8. Market position

The easy-to-use and real-time features are what make the Spectra system stand out among the other electronic banking systems in Hungary. It has been very well received by our customers (currently more than 10,000 Spectra clients). This product manages the major part of all the orders received electronically by the Bank.

Some years ago, the developer started to sell this product to other Hungarian banks under the name "Electra" with functions similar to those of Spectra.

### SPECTRANET

**SpectraNet** is an Internet solution for electronic banking. The Bank's SpectraNet provides customers with account information, enables them to execute payment transfers and offers a full range of other banking transactions from all over the world at any time.

### 1. Introduction

Like the installed Spectra client program with SpectraNet the customer can manage a wide spectrum of order types as well as make various queries of his accounts and create deposits. The electronic mailbox function allows the transfer of order packages between the installed Spectra program and the web based solution (via internet and mobile banking services) with the possibility to modify, add further signatures and send them to the bank server.

SpectraNet transactions are safe, swift and convenient, and can be done either from home or a customer's office, which saves not only time but, due to the favourable conditions, also money. To use the service all you need is a computer with Internet access.

### 2. Product description

The SpectraNet service can be used with the following two service packages each of which comprises a different range of functionalities (please see the enclosed overview)

- SpectraNet Plus
- SpectraNet Light

#### 3. Security

In developing the service, we regarded security as critical. The security of the system is therefore guaranteed by an internationally recognised multi-layer security system. In addition to the standard 128-bit SSL encryption ensuring the integrity of the data traffic between a customer's and the Bank's computer, the maximum amount of withdrawals can be limited, both at transaction and daily levels. Moreover, logging on to the SpectraNet System and signing (authorising) the orders – both for the SpectraNet Plus and the SpectraNet Light service packages – can only be done by using one of these two methods.

### Text message (SMS)

For the authorisation of orders, the Bank will send a one-off password in a text message (SMS) to the user's mobile phone number as indicated in the agreement. The system can, however, be accessed by using the User ID and a regular password (which can be modified by the user any time after login).

### Token

The user will use a Token to generate the password to log on to the SpectraNet system and to authenticate orders. The Token is basically a code generator which, depending on the time of use and the serial number of the Token, will provide a one-off code (valid for about 30 seconds). Due to its size and as it does not have to be connected to a computer, the Token gives a customer full mobility to manage his financial matters.

#### 4. Recommended technical requirements

The following technical requirements have to be met when using the SpectraNet system

- Operating system
  - MS Windows 95/95/NT/ME/2000/XP/Windows 7/ Windows 8
  - Linux
- Internet Explorer
  - MS Internet Explorer 7.00 or higher
  - Mozilla Firefox 3.5 or higher
  - Opera 9 or higher
  - Google Chrome 7 or higher
  - Safari 5 or higher
- Adobe Flash Player 9.0.28 or higher
- Internet connection
- Hardware: a computer which meets the system requirements of the chosen operating system and of Internet Explorer

### SpectraNet Mobile Banking

With the assistance of a smart phone or any mobile device having internet access a customer can easily reach the SpectraNet Mobile Banking services. There is no need for a notebook or PC anymore.

Regarding functionality SpectraNet Mobile Banking is identical with the SpectraNet internet banking facility optimised for mobile tools.

SpectraNet Mobile Banking enables the customer to approve payment transactions from anywhere in the world at any time.

### MultiCash

The well-known PC based software MultiCash is offered by several banks in Hungary with a special Hungarian payment module. It is available in Hungarian, English and German language and provides customers, who have several bank connections, with the possibility to manage their accounts held at various banks with the same system.

For detailed Hungarian functionalities please see the list on the next page.

	Spectra / SpectraNET Plus	Spectra Light / SpectraNET Light	MultiCash
OnLine system	No / Yes	No / Yes	No
Account balance (booked balance, available amount, reserved balance, overdraft facility)	Yes	Yes	No
Account history	Yes	Yes	Yes
Account statement	Yes	Yes	Yes
Reports			
Report of postal cash payment orders	Yes	Yes	Yes
Report of postal payment orders	Yes	No	Yes
Report of bulk payments	Yes	No	Yes
Report of direct debits	Yes / No	No	Yes
Report of authorisations for direct debits	Yes / No	No	Yes
Payment orders:			
HUF transfers (RTGS included)	Yes	Yes	Yes
Foreign currency transfers	Yes	Yes	Yes
HUF internal transfers	Yes	Yes	Yes
Foreign currency internal transfers (conversion included)	Yes	Yes	Yes
Standing Orders (new, modification, delete)	Yes	Yes	No
Direct Debits (new, modification, delete)	Yes	Yes	No
EU transfers	Yes	Yes	No
SEPA transfers	Yes	Yes	Yes
Bulk payment	Yes	No	Yes
Direct Debit	Yes / No	No	Yes
Collection orders	Yes	No	No
Postal cash payment orders	Yes	Yes	Yes
Making deposits	Yes	Yes	No
Terminate deposits	Yes	Yes	No
Handling of non-booked transactions (overview, delete)	Yes	Yes	No
Free format letters/orders	Yes	Yes	No
Announcing cash withdrawals	Yes	Yes	No
Cash delivery orders	Yes	No	No
Authorisation to supply banking information	Yes	No	No
Order to supply coverage verification	Yes	No	No
Loan drawdown	Yes	No	No

	Spectra / SpectraNET Plus	Spectra Light / SpectraNET Light	MultiCash
Securities functions			
Account balance (balance, available amount, market value)	Yes	Yes	No
Account history	Yes	Yes	No
Account statement	Yes	Yes	No
Stock purchase/sale	Yes	Yes	No
Pioneer Hungarian Investment Funds and Pioneer International Investment Funds issue of investment certificates	Yes	Yes	No
Issue of external Investment Funds of investment certificates	Yes	Yes	No
Securities transfer	Yes	Yes	No
Handling of non-booked transactions (overview, delete)	Yes	Yes	No
SMS service			
SMS announces referring to bank accounts (overviews of account settings, new . modifying)	Yes	Yes	No
SMS announces referring to debit cards (overviews of account settings, new . modifying)	Yes	Yes	No
Banking information queries (FCY rates, interest rates, conditions, stock exchange rates, funds)	Yes	Yes	Yes
Calculating interest rates	Yes	No	No
Other services			
Handling of order templates (partner database)	Yes	Yes	Yes
Handling multiple signatures	Yes	Yes	Yes
Handling order packages: signing and sending packages	Yes	Yes / No	Yes
Electronic mailbox function: Delivering orders to another installed place for further signatures, modifications or for the reason of sending it to the bank.	Yes	Yes / No	No
Electronic mailbox function: Delivering orders entered through the installed Spectra program to the SpectraNet System (and the other way around) for the purposes of (further) signatures, modifications and sending it to the bank.	Yes	Yes / No	No
Management of Transaction and Daily Limits.	No / Yes	No / Yes	No
Setting of default client	Yes	Yes	No
Setting of default account linked to different order types	Yes	Yes	No
Giving name to accounts	No/Yes	No/Yes	Yes
Export – import function (payment packages, templates, statements, reports) data changing with ERP systems	Yes	Yes / No	Yes
Management of the accounts of multiple account holders with a single User ID.	Yes	Yes	Yes
Network function	Yes / No	Yes / No	Yes

	Spectra / SpectraNET Plus	Spectra Light / SpectraNET Light	MultiCash
Installation and support on the spot	Yes / No	No	Yes
Multi Client function: managing of different accounts of different account holder by using one client program	Yes	Yes	Yes
Multi Site function: different modules of the client program can be installed on different places (abroad too) by using the same signing authorisation and codes too.	Yes	Yes	Yes
Viewing logs	Yes	Yes	Yes
Help	Yes	Yes	Yes
Hungarian-, English- and German- language versions	Yes	Yes	Yes

# Italy

### UNIWEB

**UniWeb** is an electronic banking system available directly on the Internet (www.unibanking.it) offered by the Bank to its corporate customers.

### 1. Product description

UniWeb ensures functional and operational flexibility by offering a whole range of separate but integrated services in a multi-company and multi-bank context. It brings together and offers both the CBI<sup>1</sup> range of standard features and the specific functions that are unique to UniCredit.

UniWeb enables the user to give instructions and get information on existing accounts in a fully secure environment. In order to optimise the management of corporate financial flows, UniWeb offers its corporate clients the opportunity to perform real-time operations and updates with UniCredit.

Ease of use of the user interface, consistent and logical navigation structure throughout the service, single log-in mode, and detailed on-line help text are other pluses offered by UniWeb. In addition, UniWeb is tailored to the actual market needs and is always evolving.

#### 2. Security

UniWeb places heavy emphasis on security. This is why the identification of authorised entities admitted to the service is only carried out by means of digital certificates, which replace the traditional system based on Access Code and Password. More specifically, each corporate signee<sup>2</sup> has a digital signature certificate and uses their digital signature<sup>3</sup> in compliance with the legal standards to send instructions.

<sup>&</sup>lt;sup>1</sup> The Interbank Corporate Banking, also known as CBI, is a banking facility process that enables a corporate customer to conduct business directly through its electronic banking system with all the Italian banks where an account is held. This system was conceived in accordance with ABI (Italian Banks Association) with the aim of granting corporate customers an adequate level of service while ensuring that standard rules are complied with. CBI centralises corporate customer relationships in respect of the whole Italian banking system in the form of a unique entry point. It provides a wide range of financial functions which are informative or commercial. Using the same standard of communication, it provides a service based on cooperation between the Italian banks without hampering competition.

<sup>&</sup>lt;sup>2</sup> The subject entitled to represent the Customer, as duly authorised by the latter to operate in standard fashion on relationships that are accessible via the UniWeb service.
<sup>3</sup> A special type of qualified electronic signature based on a system of paired asymmetric keys – one public and one private – allowing the subscriber (via the private key) and the recipient (via the public key) respectively to disclose and check the origin and integrity of a digital document or set of digital documents.

Furthermore, in order to optimise the use of this service, users can be authorised to view data and prepare instructions (but not to sign them).

The security system is always in and efficient, i.e.

- During the log-in phase: in order to verify and guarantee the identity of the connecting party, it is necessary to use the digital certificate followed by one's own password in order to gain access to UniWeb. This way, a validity check of the certificate used and of the identification data of the connecting party shall be carried out.
- During the operational phase: using the smart card and password, the instructions sent out are digitally signed and UniWeb controls and checks the specified digital signature.
- The digital signature, although placed on all instructions issued, is only transmitted to those addressed to UniCredit.

Thus, the security architecture adopted by UniWeb, which also includes the most sophisticated encryption systems for the exchanged data (128-bit SSL protocol), guarantees:

- Confidentiality: The data exchanged with the site cannot be read by unauthorised persons
- Integrity: The data exchanged with the bank cannot be altered
- Authenticity of the parties: The identity of the connected parties (the user and the bank) is verified
- Non-Repudiation of the sender: The parties are certain to get the information necessary to guarantee the document's origin

### 3. Your benefits

- Availability of a web-based, multi-company and multi-bank Electronic Banking Service with a security system that meets the highest standards from a technological perspective.
- Real-time informative and operational interaction with UniCredit and multi-bank interaction using CBI and international standards (SWIFT)
- Simplified functionality and full compatibility with company ERP systems
- Availability of unique, value-added functionality to optimise interaction with UniCredit
- Total, integrated and efficient control of receipt and payment feeds
- Efficient financial management of credits and debits, including the digital management of documents and invoices
- Speed and ease of execution of transactions and consultation of information
- Optimisation of control and authorisation processes, including the ability to change the privileges of authorised users
- Move to paperless processes

- Flexibility of use with the possibility to customise display and operational aspects of the system
- Qualified support services, constantly available via multiple access points (Online Help, Contact centre with telephone support)

### 4. Commercial solutions

UniWeb offers significant functional and operational flexibility by providing separate and complementary services, designed and developed in order to satisfy the diverse operational requirements of UniCredit's business customers.

UniWeb currently offers two solutions:

- UniWeb 2.0
- UniWeb 2.0 Plus

### UniWeb 2.0

This solution provides online informative and operational functionality for real-time communication with UniCredit as well as for communication with other banks according to CBI standards. It provides the following functionalities:

The OnLine section contains functions that allow the users to communicate in real-time with UniCredit, providing exclusive and high value-added functionality in terms of receipts and payments and advanced financial services such as

- Balances and transactions: View information recorded in current account statements, with the same update frequency as within the bank and the possibility to perform searches of historical data
- Extended analytical Reason Code: Display of extended analytical reason code for current account transactions recorded in real time
- Download bank account transactions: Including extended analytical reason code
- Available balance: For current accounts and cash balances by currency for 8 working days
- Bank transfers, SEPA Bank Transfers, high-value Bank transfers and urgent Bank transfers in real-time: This functionality allows for the immediate execution of real-time payments from a current account of UniCredit to another current account at any bank
- Real-time account transfers: Transfer funds in real-time
- Bank transfer details (within Italy and abroad): An analytical summary of all bank transfers received and/or sent, with the possibility to perform searches and download the complete set of data
- F24: Payment of the standard F24 tax return and "identifying elements", either immediately (in real time) or by the first payment deadline
- DocOnLine (On-Line Document Management): An exclusive service that allows customers to receive and electronically manage the banking documentation of UniCredit (debit

and credit accounts, account statements and summary documents), therefore reducing the requirement for hardcopy documentation. DocOnLine makes it possible to simplify and streamline business processes and procedures for managing banking transactions

- Credit Card Reporting: The ability to view data relating to corporate credit card transactions, for card issued by UniCredit
- Car Certicates: Opportunities for car dealers to pay and/or finance digital car certificates for Parent Companies that have estabilished an agreement with UniCredit
- Monitoring: Possibility to have a complete and integrated view of all transactions pending authorisation

The CBI service offers the customer the CBI component that allows the customer to work with all subscriber banks.

Within the framework of the CBI functions, defined by the CBI Consortium this solution includes an initial product set aimed at offering high value to customers. The key services offered relate to the following specific areas

- Information: Query, display and print account balances and transaction relating to Current Accounts, Prepayment Accounts and Portfolio Reporting
- Collections: Collection Management and its related results Ri.ba (collection order), R.I.D. (pre-authorised debit instruction), M.Av. (payments against notice)
- R.I.D. electronic archive alignment: Allows the transactions in question to be managed fully and efficiently
- Payments: Electronic Management of specific transfer (of payment instruction slips relating to Bank transfers within Italy and abroad, account transfers and funds clearing, salaries, payment of bills and receipted cheques
- SEPA Credit Transfers and SEPA Direct Debit Core and B2B: SEPA compliant transactions
- Monitoring: Possibility to have a complete and integrated view of all transactions pending authorisation
- Export area: Management of information provided by the Banks of the Company in the same format. Among the information available is POS Reporting which allows the user to view and download UniCredit POS terminal data
- Confirmation of receipt: Receiving feeds from the bank of all receipt and payment transactions

The "Financial Services" section contains special dedicated functions that allow the user to manage the advance payment of invoices using a completely paperless process

 Electronic Invoice Advance: This is an innovative service which allows the customer to manage electronically (thus eliminating paper-trails and facilitating the optimisation of process) the submission of invoices to UniCredit, the drafting and signature (in compliance with legislation) of advance request forms as well as obtaining updates on the status of credit disbursement and the invoices related to the advance; this functionality has been developed according to CBI standards and includes value-added services for UniCredit customers

• Exchange Rate Listing: Allows the user to identify the reference exchange rate of the major trading currencies, for the previous day or from historical data

The user administration section allows the company administrator to manage, consistent with the details of the contract and its limits, powers and privileges of signatories and users that use UniWeb with, where necessary, a maximum level of detail for the account/function/powers of signature relationship.

### UniWeb 2.0 Plus

In addition to the functionality included in version "2.0", Uni-Web 2.0 Plus contains functionality and enhancements that are aimed at more sophisticated users, including an advanced version of cash management, a set of financial functions and services designed specifically for companies that transact with foreign parties, an improved administration section with the option to define powers and privileges and other utilities that optimise the management and use of the application (i.e. scheduler, the ability to make transactions and files not editable within the application)

- Foreign Exchange Trading: The customer can directly access the Exchange rate negotiation procedure for Foreign Exchange Spot dealing (buying and selling of currencies against the Euro and arbitrage between two non-Euro currencies)
- Credoc Import: Opening and management of issue and modification requests
- SWIFT MT101: Payments to foreign banks
- SWIFT MT940: Reception and integrated management of statement feeds from foreign banks
- EuropeanGate: Allows the customer to send payment feeds to all the foreign banks of the UniCredit Group through a single access point and using a single CBI format; the conversion and verification of feeds, where necessary, is carried out automatically
- Advanced Cash Management: Integrated advanced cash management within Italy and abroad, with bank statements, balances per currency and intraday changes, where available
- Scheduler: Allows the integration of company ERP systems within UniWeb by scheduling the automatic upload, import and download of files
- Locked management: Prevents transactions and files from being modified within the application
- Advanced Admin area: Allows the customisation of signature powers, including the following: definition and management of roles for signatories and users, management of transaction privileges within the application, creation/ management of signatories/user groups

### **Customer Service**

UniWeb provides a structure that supports the customer with any technical or operational issue when activating or using the service, through the support offered by the Contact Centre and the dedicated Online Help function. Corporate consultants and product specialists are always available at all branches of Uni-Credit in order to provide any information or explanation or to activate the service.

### 6. Recommended technical requirements

In order to gain access to UniWeb computers must be configured as follows

- Operating System
  - Windows 8
  - Windows 7
  - Windows VISTA
  - Windows XP Service Pack 3
- Browser
  - Microsoft Internet Explorer 6 or higher (with 128-bit coding level)
  - Java Sun version: Version 1.6. update 25 or higher
- Smart card reader or Token and Actalis "digital signature" software previously installed The serial smart card reader is non-compatible with Win-

dows Vista and Windows XP Service Pack 3

- Hardware requirements
  - 1 free 9-pin serial port and one PS/2 port (in the case of RS232 serial reader)
  - 1 free USB port (in the case of USB reader)
  - At least 17 MB of available disk space for standard installation;
  - RAM memory: 1 GB recommended

The updated version of system requirements is always available in the information section of the UniWeb website (www. unibanking.it).

### 7. Market position

Due to its ability to fulfil stringent security requirements, which is one of the core features of UniWeb, and the exclusive and full range of functions developed and implemented on an ongoing basis UniWeb is currently the leading electronic banking system in Italy.

## TLQ CORPORATE BANKING

**TLQ Corporate Banking** is an electronic banking product for corporate customers which can be used in client-server mode with dedicated software installed on a personal computer.

### 1. Product description

TLQ Corporate Banking allows customers to exchange financial flows with the Bank in real time and with banks that subscribe to the CBI Corporate Banking Interbancario\* service with which they have a bank account.

### 2. Security

Access to the service is subject to security checks based on the company's identification code, the user's identification code, and a password. Information exchanges take place via an SSL3 128-bit secure connection.

The user profiling function used by TLQ Corporate Banking is highly complex. The system administrator can define access to the application for individual users with a level of detail that goes right down to the individual current account.

As regards the instruction area, TLQ Corporate Banking offers the option of defining a "signature book" of authorisations for communication. The signature book manages individual, joint, and multiple signatures, establishing maximum amounts for each individual signatory power.

### 3. Customer profile

TLQ Corporate Banking is a multi-bank, multi-company and multi-user service for corporate customers which features all the functions laid down by the CBI standards and which allows for extensive integration into corporate accounting systems. It also offers exclusive additional services which complement the product and offer high value to the customers.

### 4. Your benefits

- Total control over collection and payment flows
- Multi-bank, multi-company, and multi-user application
- Efficient security management
- Real-time information and instructions with the Bank
- Possibility of importing / exporting information and instruction data and subsequently integrating transactions with corporate applications
- Easy execution of transactions
- No need to send paper-based confirmations to the Bank

### 5. Available applications

TLQ Corporate Banking offers several applications grouped by area of interest (books) which can be used by multiple operators of the local network. Each book contains a set of applications with different functions where users can operate, on a case-by-case basis, in "data entry" mode and / or import and export slips in CBI format or on a proprietary path by means of parameter settings.

Due to the CBI standard multi-banking function, customers using TLQ Corporate Banking have access to the following

- Information organised around bank accounts (including foreign accounts), advance accounts and portfolio reporting: query, viewing and printing of balances and transactions of the user's own accounts
- Collections (collection orders, pre-authorised debit instructions, payments against notice): management of collections and control over the processing status (outcome)
- Electronic alignment of pre-authorised debit instructions file which allows the user to manage the relevant transactions efficiently
- Payments (bank transfers to Italy or abroad, money transfers and fund transfers, salaries, collection of bills and receipted cheques): electronic management of payment instruction slips
- Payments of F24 forms, for payment of taxes, social security etc.
- Free flows: management of information provided by the Banks to the company. The Bank's POS reporting is also available.
- Receipt confirmations by the Bank for all collection and payment orders
- EuropeanGate active connection access

Access to real-time services takes place through dedicated applications included in the On-line Book. These services allow the user to carry out the following operations with the Bank

- Information on bank account transactions and balances
- Detailed information on received and issued bank transfers
- Domestic Bank transfer orders
- DocOnLine (Online Document Management)

This is an exclusive product that allows the user to receive and electronically manage banking documentation from the Bank (credit and debit slips, bank statements and summary reports), thus replacing receipt of paper-based documents. DocOnLine enables the user to simplify and optimise corporate procedures and processes for managing banking communications.

TLQ Corporate Banking also offers customers a number of high value-added exclusive applications aimed at optimising the company's financial management and the relationship with the Bank

 Automatic export of flows: automatically exports flows received from the bank's computer system and sends to the company's applications

- Automatic acquisition of flows: automatically acquires flows from the company's ERP system. This is the recommended solution for companies with large volumes of transactions to be sent in "armoured" mode
- Check-up Service: utility that checks the installation integrity of TLQ Corporate Banking and checks for the presence of new versions of individual functions, offering the ability to download updates in a straightforward and transparent manner
- Map view of information files: this feature allows the user to view information on specific bank formats and export this information according to user-defined criteria

A dynamic on-line help function and a specific Contact Center structure (also managed with remote assistance solution) are always at the customer's disposal.

### 6. Recommended technical requirements

- The minimum system requirements for running TLQ Corporate Banking are as follows
  - Microsoft Windows XP Service Pack 3 or higher
- Browser
  - Internet Explorer 6 Service Pack 2 or higher with security protocol SSL3 (Cipher Strength 128-bit)
- Hardware requirements
  - Processor: Intel Pentium IV processor or higher AMD Athlon 64 or higher
  - RAM: 1 GB RAM
  - Hard disk: at least 5 GB of available space
  - Network: LAN 10/100 Ethernet
  - Monitor: 1024x768 resolution (color depth 16-bit) or higher

### 7. Market position

TLQ Corporate Banking holds a strong position among the various electronic banking software packages available in this market sector (client server solution) and is very well received by customers.

## Poland

### PekaoBIZNES<sup>24</sup>

**PekaoBIZNES**<sup>24</sup> is a unique electronic banking system used by every second large company and every second big city in Poland. This modern transactional platform provides users with full range of products and services: from the simplest transactions in the account to those which meet expectations of the most demanding clients. The attractive graphic design, optimised functionalities and open architecture make the system user friendly and easy to be developed according to the clients' needs. The system is available in 3 languages – Polish, English and German.

PekaoBIZNES<sup>24</sup> was awarded many times in the "World's Best Internet Bank Awards" competition organised by Global Finance – as the best corporate/institutional internet bank in Poland and even in the CEE region.

### 1. Product description

PekaoBIZNES<sup>24</sup> is an up-to-date, convenient and fully secure online platform which enables users to make transactions with their contractors, as well as to carry out other complex financial operations, regardless of time and place. It offers a wide range of financial products starting from cash management and cross-border services, through treasury and investments to trade finance products and even the leasing module.

The Cash Management module offers a full range of

- basic products, such as all types of domestic and foreign money transfers, payroll payments, mass payments and corporate business cards service,
- advanced products, such as e-invoicing, automatic cash withdrawal, direct debit, postal money order and payment order,
- customised products, such as cash collection, collect, cashpool, POS terminals service, sweeping orders and pay-bylink operations.

Thanks to the above products the PekaoBIZNES<sup>24</sup> users have continuous control of the enterprise's finances in the scope of payments and liquidity management.

With the use of Cross-border Product Module enterprises can control and manage their accounts in all countries in which their company's branches are located. Handling of accounts, filling of orders, viewing account statements and statuses of operations are facilitated by the following products:

- GAITS (Global Account Information and Transfer Service) which allows to handle and monitor all company's accounts around the world maintained by banks affiliated in the SWIFT network,
- EuropeanGate which allows to handle accounts maintained by banks belonging to the UniCredit Group.

The following Treasury and Investment services are available in PekaoBIZNES<sup>24</sup>

- Term deposits the Dealing Module with Deposit Module enables the users to set up and terminate a term deposit as well as to manage its statements.
- Foreign exchange the Dealing Module enables the users to buy and sell currencies online on preferential terms (all the FX transactions are settled in real time).
- Automatic investment of funds PekaoBIZNES<sup>24</sup> enables to achieve an efficient liquidity management and better financial results thanks to the investment of an aggregated amount (in conjunction with sweeping orders or consolidation of balances) and convenience resulting from the automatic investment of all funds at the end of the day.
- Custody services PekaoBIZNES<sup>24</sup> enables to look through custody accounts, information and transactions in custody portfolio, corporate actions connected with securities in portfolio (e.g. payment of dividend).

The Trade Finance services offered via PekaoBIZNES<sup>24</sup> are

- Pekao Trade which allows to manage trade finance transactions at every stage of their implementation and have permanent access to information in real time,
- eFinancing which ensures electronic service of discount products, including various models of forfaiting (over 20 financing structures are tailored to different business models and relationships between trading partners),
- Guarantees online which allows to manage guarantees, securing performance of clients contractual obligations, via internet,
- Receivables pool financing online which enables companies an immediate release of frozen funds thanks to advance financing of receivables for issued invoices,
- EDI Financing an interface between PekaoBIZNES<sup>24</sup> and the external, popular in Poland, EDI platform which gives its users the possibility to initiate financing of receivables at Bank Pekao at the same place where they exchange electronic commercial and logistic documents.

PekaoBIZNES<sup>24</sup> is the first corporate e-banking platform in Poland to offer the Leasing Module. Its users can review their leasing contracts concluded with Pekao Leasing (Bank Pekao's subsidiary), monitor repayment schedules and invoice statuses as well as execute easy "one click" payments.

### 2. Customer profile

PekaoBIZNES<sup>24</sup> system is designed to satisfy specific needs of corporate clients – large enterprises and corporations as well as municipal units. The system effectively supports the dynamic development of companies and enables to optimise service operation costs and settlements between trading partners.

### 3. Your benefits

### Online coordination

PekaoBIZNES<sup>24</sup> allows you to coordinate all financial transactions via internet. It also ensures:

- current information about balances on accounts (current, deposit, credit and business cards),
- fast information about the statuses of transactions sent.

### Fastest settlements

PekaoBIZNES<sup>24</sup> is an attractive platform for settlements with your business partners. You gain:

- ability to perform online settlements between companies that hold an account with Bank Pekao,
- attractively short time of the processing of transactions with the partners who hold accounts with other banks.

### Guarantee of security

PekaoBIZNES<sup>24</sup> is provided with the most modern solutions on the market that ensure security to your data and transactions – see more: Security chapter.

### Convenient co-operation

Thanks to the PekaoBIZNES<sup>24</sup> platform, you gain

- ability to individually choose the type and frequency of any notices and information received,
- personalised and direct way of communication with professional Relationship Managers dedicated to take care of your company,
- PekaoBIZNES<sup>24</sup> HotLine a team of experts who provide assistance by phone or via electronic mail. Any questions connected with the handling of the system, filling out of forms or activating of new functions are answered by our specialists.

### Efficient and simple handling

You can use the system quickly and efficiently thanks to:

- functions that are easily accessible and arranged in an intuitive way,
- personalised users' desktop with the most used information and products,
- a system of help which always prompts what to do and explains all functions in a comprehensible way,
- auxiliary data bases that streamline work and guarantee easy access to required information and the possibility to create customised reports and templates.

### Modern solutions

PekaoBIZNES<sup>24</sup> is able to fit in with the procedures of your company and the processes that take place in it perfectly well. That is possible thanks to

- integration with the company's financial-accounting system,
- flexible schemes of acceptance for payments and applications,
- options of determining in detail the scope of rights for individual employees,
- easy access to banking products without the necessity to use several systems at the same time.

### Full integration

PekaoBIZNES<sup>24</sup> ensures compatibility of data exchange formats with the ERP, financial-accounting and HR systems used by companies.

After the software, provided by our partner producers, is certified by Bank Pekao under the PekaoREADY program you can be sure that these systems are integrated with PekaoBIZNES<sup>24</sup> in the scope of

- export and import of data (in case of traditional methods of data exchange), and/or
- exchange of messages in XML file (in case of communication via Web Services).

We recommend direct connection between PekaoBIZNES<sup>24</sup> and your company's financial-accounting system.

Pekao Connect is a state-of-the-art solution based on the Web Services technology. It expands the existing functionalities of a company's financial-accounting system, allowing to perform a number of banking activities, such as creating and signing orders or downloading statements directly from the internal ERP/financial-accounting system, without the need to log in to PekaoBIZNES<sup>24</sup>. The orders are sent to the Bank in real time. It is designed for corporate clients interested in full integration of the systems, the fastest and most effective financial data exchange and maximal optimisation of processes.

### 4. Security

PekaoBIZNES<sup>24</sup> features comprehensive security solutions in each area with influence on system operations.

Safe internet technologies

- Web servers certification (VeriSign CA),
- SSL 3.0 encrypting technology with 128-bit key, which protects transmitted data against manipulation and loss,
- control of activity in the system through the use of session keys,
- system logs register of all system users and activity.

### Access to the platform

- Security of logging
- biometric technology (fingerprints) and digital signature on the processor card. When the fingerprint from the person and the fingerprint template stored in the chip during the card activation match, then the identity of the cardholder has been verified. Match-on-Card technology together with the cryptographic mechanisms offer increased security and preserve the user's privacy,
- individual identifier and masked password,
- using of traditional computer keyboard as well as virtual screen keyboard,
- automatic account blocking in case of repeated wrong data during logging,
- access from determined IP addresses, control of hours/ days/period of access,
- automatic log-off in case of inactive user over a defined timeframe.
- Security of access to data and functionalities
  - precise definition of user rights concerning either each function of the system or access to some specific data/ accounts (preview, change),
  - "Super user" with special privileges to manage rights of other company's users without any contact with the Bank.

### Authorisation

- of transmitted orders
  - possibility to configure multi-level/multi-personal acceptance schemes with amount, time and currency limits reflecting competences in a company (the system constantly controls the utilisation of limits),
  - digital signature (together with additional biometric feature) ensuring authenticity of signatory, integrity of transaction, undeniableness of a sender and data confidentiality,
  - qualified certificate issued by Certification Authority CA.
- of contractors database
  - the requirement to authorise changes in contractors database.

Safe data exchange between PekaoBIZNES<sup>24</sup> and ERP/financial-accounting systems

- the Bank's special encrypting software implemented into the client's internal system to prevent data manipulation,
- possibility to import files only from the defined location,
- online data communication with double SSL protection,
- use of PKI certificates (Public Key Infrastructure).

### Infrastructure protection

Firewall system protecting against unauthorised access, monitoring of all users' and system's activities allowing to verify the integrity and undeniableness of data, especially orders.

#### Organisational protection

Coherent operating procedures for PekaoBIZNES<sup>24</sup> system administrators and Relationship Managers servicing corporate clients.

### Technical protection

Strictly controlled access to IT and technological areas.

### 5. Advantages of PekaoBIZNES<sup>24</sup>

- The widest range of financial services and operations integrated on one platform
- User friendly navigation ability to perform complex banking transactions with ease usually reserved for retail banking
- Fast and efficient service excellent computing power and system's capacity:
  - nearly 10 different types of transactions processed every second
  - 220 ths. payment orders executed daily
- excellent data matching and quick system response
- Maximal security of transactions, data and information
- Easy integration with ERP/financial-accounting systems
- Attractive graphic design ensuring balance between user's perception capacity and the message contents
- Fast assimilation of knowledge how to use basic and advanced system functions, which allows companies to save time, reduce costs and quickly benefit from the implementation of the system

### 6. Recommended technical requirements

PekaoBIZNES<sup>24</sup> is a fully browser-based solution with moderate hardware and software requirements. The following software is recommended to ensure correct operation of the system:

- Windows XP with a web browser
  - Firefox 6.X or higher
  - Chrome
  - Internet Explorer 8.0
  - Opera 11.X
- Windows Vista, Windows 7 with a web browser
  - Firefox 6.X or higher
  - Internet Explorer 8.0 i 9.0
  - Opera 11.X
- Linux with a web browser
  - Firefox 6.X
  - Opera 11.X

- Mac OS X starting from 10.6.x version with a web browser
  Firefox 18.X
  - Opera 12.X
  - Safari 5.X

The web browser should not be run in the quirks mode.

The system is designed to support 1280x1024 or higher resolution.

### 7. Market position

PekaoBIZNES<sup>24</sup> is the most advanced internet banking system on the Polish market in terms of functionality and the number of clients. It is therefore the most commonly used and innovative Internet banking system in Poland – PekaoBIZNES<sup>24</sup> is the first corporate transaction banking system in Europe with biometric fingerprint authorisation.

Pekao is a bank leader in systems' integration in Poland based on the widest direct connection offer for clients on the Polish market and cooperation with the greatest number of 40 top providers of over 50 ERP/financial-accounting systems which are compatible with PekaoBIZNES<sup>24</sup> platform.

## Romania

### BUSINESSNET

**BusinessNet** is a web application provided by UniCredit Tiriac Bank to its business and corporate customers which allows the processing of banking operations as well as bank reporting via any computer connected to Internet.

### 1. Product description

BusinessNet is a modern web-based application accessible 24/7, presented to our customers in two different versions

- BusinessNet Basic small volumes of transactions
- BusinessNet Professional large volumes of transactions (features interfacing with ERP systems)

### 2. Advantages of using BusinessNet

- Mobility: BusinessNet can be accessed from any location where there is an Internet connection
- Flexibility: the application does not require any prior installation and is available 24 hours a day, seven days a week
- Time saving: you avoid daily trips to the Bank's branches and speed up the processing of your transactions

- Money Saving: the processing fees for the operations sent through this application are lower compared to those who charged for the paper-based operations
- Help: the "help" option is available in every menu of this application guiding you to the user's manual; moreover, we offer a telephone line with dedicated personnel, which will assist you in issues regarding this application

### 3. "BusinessNet Basic" package offers

A detailed overview on the accounts opened with our Bank through

- Viewing the accounts opened with the Bank and consulting the processed transactions, including the ones through cards attached to the respective accounts
- Viewing the term credits with all the related information (credit limits, outstanding balance, approval date, tenors and monthly interests applied)
- Viewing the credit lines with all the related information (approval date, tenors, credit limits, outstanding balance, the current accounts connected to the credit line as well as the interest estimations for the respective maturity date)
- Viewing the term deposits accounts
- Viewing rejected transactions (transaction which could not be processed for various reasons)

- Real-time overview of the settlement process of cheques and promissory notes (either to be collected or to be paid)
- Automatic releases of notifications regarding balance changes or the processing of the operations on accounts connected to application

Allows you to process current account operations

- Domestic payments (intra or inter-banking, state treasury)
- Foreign currency payments (national as well as cross border)
- Foreign exchange transactions
- Inter-account transfers
- Creating and cancelling term deposits

Facilitates the documentary business

- Submit issuance orders or amendments for bank guarantees
- Submit opening orders or amendments to letters of credit
- Submit orders for collection of commercial and financial documents

Facilitates the processing of banking operations

- Possibility of saving beneficiaries-related information in order to efficiently fulfil future payments
- Saving templates for domestic payments and foreign currency payments leading to a more efficient use in the future
- Predefined forms for payments directed to specified utility suppliers
- Saving templates or orders for bank guarantees, letters of credit and collections
- Debt reimbursements relating to credit cards
- Programming the payment orders for automatic future processing by the Bank
- Authorisation mandates for direct debit payments to different utility suppliers (beneficiaries)

Personalising the application through

• The option of setting any signature structure for the approval of operations processing

Allows you multi-bank and multi-company access

 with his User ID and digipass, the user can access the current accounts opened at various banks within UniCredit and/or the accounts held by several legal entities of the company.

### 4. "BusinessNet Professional" package offers

In addition to the functions of "BusinessNet Basic" (mentioned in previous point 3), "BusinessNet Professional" package with its special feature BusinessNet Connect allows to interface with other accounting system (ERP type). BusinessNet Connect is designed for large and medium-sized companies handling a high number of outgoing and incoming payments. The innovative solution streamlines internal processes and simplifies the procedure of active and passive communication between your company's Financial and Accounting System (ERP<sup>1</sup>) and UniCredit Tiriac Bank's Internet Banking Portal BusinessNet.

Through synchronisation of data between your Accounting System and UniCredit you can automatically

- upldoad payment files
- download status messages of the uploaded payment files and statements in MT940/942 format

All financial data is available in your ERP System online, without the necessity to manually import or export files.

BusinessNet Connect is user-friendly and follows the well known and intuitive "Drag & Drop" concept<sup>2</sup>. After placing the payment files from the ERP System in the dedicated folder, they are automatically uploaded to the Internet Banking Portal BusinessNet.

### 5. Security

Communication secured by SSL protocol with 128 bits encryption, combined with the authentication based on the OTP devices (one-time password), called "digipass" offer a high level of security and confidentiality for the validation and the processing of the transactions.

### 6. Basic technical requirements

- A computer with Internet access
- Browser (Internet Explorer 7.0, Mozilla Firefox 3.6 or other newer versions) compatible with the SSL protocol with an 128 bits encryption key
- A monitor with a minimum resolution of 800 x 600 pixels (we recommend 1024 x 768 pixels)

<sup>&</sup>lt;sup>1</sup> ERP = Enterprise Resource Planning

<sup>&</sup>lt;sup>2</sup> This allows the user to click and hold the mouse button down over an element, drag it to another location and release the mouse button to drop the element there

## Russia

### ONLINE BANKING

**Online banking** is a convenient and secure web-based tool for managing a company's account via Internet.

### 1. Product description

Online banking system gives the customer the unique possibility of remote access to the system, enabling accounts to be managed from any PC with Internet access at any time.

The main functions are

- Initiation of domestic and cross border payments including possibility of importing payments from the customer's ERPs
- Payment execution monitoring
- Account statements and intraday account statements in different formats

### 2. Customer profile

This product suits perfectly for both domestic and international corporate customers who are looking for a web-based solution with possibility to have access to a banking service from any office via Internet access.

### 3. Your benefits

- User-friendly bilingual interface
- Security
  - Login and PIN (Personal Identification Number the personal "password")
  - Personal digital "signature" for each signatory
  - End-to-end security (SSL)
  - Customisable user access levels
  - Additional security tools (IP/MAC address list, single time passwords etc.)

### 4. Advantages of this product

- Time-saving, independence from bank opening hours
- Remote access via Internet
- No software installation required
- Compatibility with customers ERPs facilitating operational work
- Flexible funds management: statements, orders, free format messages
- High level of security
- Possibility to use the third ("VISA") signature to control and authorize all domestic payments generated and signed by subsidiaries.

### 5. Recommended technical requirements

- Windows 95/98/ME/NT2000/XP
- Internet Explorer 5.5 or higher

### 6. Technical support

The e-banking support team of the Bank will give the customer individual support by using specific software which evaluates the Bank's and the customer's result.

### 7. Market position

As Online banking is easy to implement and to handle, it has been well received by the Bank's customers (currently 9,500 users) and holds a strong position among the various electronic banking software packages available in this market sector.

## Serbia

### E-BANK

**E-Bank** is an electronic banking system developed by HAL-COM, a Slovenian software company.

E-Bank is also well represented in Slovenia, Bosnia & Herzegovina as well as in Serbia. Eight banks in Serbia use this electronic banking system.

### 1. Product description

E-BankisaSlovenianproduct, developed by the software house Halcom Informatika d.o.o., Ljubljana (http://www.halcom. si). The basic system is client-server based, and the customer needs a special client program to communicate with the bank server. In addition to the basic system there is a special browser-based application which is used for the remote signature of payments prepared and sent to the server on the Hal E-Bank client application. E-Bank is very user friendly and enables the transacting of domestic and international payments, the receipt of an account overview, daily entries and statements, exchanging messages and files with the Bank using a secure channel and the building of very sophisticated data exchange interfaces with the companies accounting system. The system also has a very good archive of sent payment orders, messages and files. E-Bank is a multi-banking system which can be used to manage all accounts opened in banks in Serbia using the same electronic banking system

- E-Bank permits both stand-alone installation (all users work on one PC under their individual user profile) as well as network installation (each user has his own client installation on his PC; other users, however, can also log on to this installation under their individual profiles). Stand-alone installations are based on MS Access database, network installations on IBM DB2
- Communication between the company and the Bank is possible either via Internet (TCP/IP) or telephone lines (analogue or ISDN).The user interface is very user-friendly and very intuitive. E-Bank therefore needs little training and helpdesk support. The distribution of new releases and patches is also very simple: the user can download new releases from the bank server and the bank can distribute small patches directly to all customers
- A special browser based application is available on the Bank's Internet site for the purpose of remote signature. This additional application allows to review balances and turnovers on accounts to be viewed and payments created in the Hal E-Bank client application to be signed remotely

### 2. Security

- The security of E-Bank is built on the Public Key Infrastructure (PKI). Users of the E-Bank system each have to log in with their digital certificates which are stored on a smart card. Halcom CA, the Certificate Authority established by Halcom Informatika d.o.o., issues the digital certificates and the electronic signature keys. All banks offering E-Bank are sub-contractors of Halcom CA. A Smart Trust system is used to generate digital certificates and electronic signature keys. Halcom CA is registered as an authorised issuer of the digital certificates at the Ministry of Information Society and is the only company with such authorisation
- This type of security architecture permits users to manage all accounts for which they have been authorised in all banks supporting E-Bank with only one smart card. A PIN (Personal Identification Number a personal "password") secures the digital certificate on the smart card of the user. User identification is carried out via the digital certificate locally on the client as well as on the bank server when sending or collecting data
- The electronic signature keys comprise 1024 bit. Every payment order, message or file sent by the client to the Bank or vice versa is digitally signed by the private key of the user or bank. The communication protocol used is similar to FTP. In addition, communication is secured by SSL encryption

### 3. Customer profile

This product is suitable for all types of companies. It is especially recommended for companies which hold accounts with different Serbian banks offering the same system. E-Bank perfectly meets the company requirements for a highly automated system for the smooth exchange of data with the Bank.

### 4. Your benefits

- Faster, more efficient and cheaper execution of domestic and international payments
- Lower administration costs in companies
  - Electronic payments (i.e. paperless)
  - Connection to the company's information system
  - Lower bank fees
  - Time-saving
- Forward valued payments
- Available helpdesk support
- Clear review of transaction history
- Simple upgrading (download of new software release)

### 5. Advantages of this product

- Communication with some of eight Serbian banks
- Very user friendly
- Time-saving, independence of bank opening hours
- Payment orders are strictly governed by the rules of the National Bank of Serbia

 Interfaces with other programs facilitate operational work Helpdesk

### 6. Recommended technical requirements

- Windows 98 / ME / NT2000 / XP
- At least 30 MB free fixed-disc storage
- At least Pentium 200 MHz with 32 MB RAM
- Free COM port or USB port (for smart card reader)
- Modem or access to Internet

### 7. Market position

E-Bank is one of three electronic banking systems currently offered in Serbia.

### BUSINESSNET PROFESSIONAL

**BusinessNet Professional** is an Internet banking service designed to satisfy the sophisticated needs of corporate customers. To manage corporate customers accounts using BusinessNet Professional, all the customer needs is access to Internet, an Internet browser and an electronic security token independent of the computer.

### 1. Product description

The browser based, online Internet banking system offers convenient and secure access to banking services.

BusinessNet Professional is an Internet banking solution specially developed for corporate clients with specific needs in the area of Cash Management (e.g. receipt, display and export of statements of accounts kept in other banks MT940/942).

#### 2. Customer profile

BusinessNet Professional is designed to satisfy needs of all types of business and corporate clients, i.e. business clients, small and medium-sized enterprises and large corporate clients.

### 3. Security

- The pocket electronic safety key independent of the computer is required for the login and authorisation of transactions
- Option of multiple authorisation of payment orders using structured signature authorisations at the account level
- Flexibility in setting user rights at the account level

#### 4. Your benefits

• Possibility of accessing the system wherever you are without the need for a fixed software installation

- Possibility of unlimited collaboration and data-sharing between the service users, regardless of their geographic location (e.g. checking, correcting, signing of payments)
- Online information on connected accounts

### 5. Advantages of this product

Basic functions – active transactions

- Uploading of domestic and foreign payment orders from a file created by the accounting system
- Submission of domestic payment orders (standard payments, fastpayments, collection requests, transfers between accounts access for which the user is authorised, standing orders, collection authorisations)
- Submission of foreign payment orders

#### Basic functions - passive

- Current account balances with the possibility of aggregating them
- Transactions history
- Statements of accounts kept with our Bank with the possibility of exporting to the accounting system
- Statements of accounts kept with other banks, delivered through MT940/MT942, with the possibility of exporting to the accounting system
- Cash Management function overview of closing balances on accounts kept with the Bank and for accounts kept with other banks, with a possibility of aggregating the balances
- Possibility of granting access to accounts held by multiple business entities to a single user (utilising a single access profile and security calculator), with a high level of user comfort
- Possibility of establishing structured signature authorisations (including use of transaction limits) at the account level
- Great flexibility in setting user rights at the account level
- Possibility of creating payment order templates and databases of business partners
- Possibility of setting up e-mailing based on precisely defined parameters
- Wide range of options for customising the service favourite pages, designating a preferred account, etc.
- Possibility of exchanging messages between the Bank and user
- Archiving of payment orders list of authorised (signed) transactions submitted to the Bank for processing
- Information on payment cards
- Information on securities

### 6. Recommended technical requirements

- Supported OS / browser combinations
  - Windows (XP/2000 or higher)/IE 6.0 or higher
  - Windows (XP/2000 or higher) / Firefox 1.5 or higher
  - Linux / Firefox 1.5
  - Mac / Firefox 1.5
- Internet browser: Microsoft Internet Explorer version 6.0 or higher, Firefox 1.5 or higher

## Slovakia

### BUSINESSNET

**BusinessNet** is an Internet banking service designed to satisfy the sophisticated needs of corporate customers. To manage corporate accounts using BusinessNet, all the customer needs is access to Internet, an Internet browser and an electronic security token independent of the computer.

### 1. Product description

BusinessNet is a browser-based Internet banking solution offering convenient and secure access to banking services.

BusinessNet is available in two versions

- BusinessNet Internet banking for small business clients and corporate clients
- BusinessNet Professional Internet banking for corporate clients with specific needs in the area of Cash Management (e.g. receipt, display and export of statements of accounts kept in other banks MT940/942 and import of domestic and foreign payments)

### 2. Customer profile

BusinessNet products, namely BusinessNet and BusinessNet Professional, are designed to satisfy the needs of all types of business and corporate clients, i. e. business clients, small and medium-sized enterprises and large corporate clients.

### 3. Security

- The pocket electronic safety key independent of the computer is required for the login and authorisation of transactions
- Option of multiple authorisation of payment orders using structured signature authorisations at the account level
- Flexibility in setting user rights at the account level

#### 4. Your benefits

- Possibility of accessing the system wherever you are without the need for a fixed software installation
- Possibility of unlimited collaboration and data-sharing between the BusinessNet users, regardless of their geographic location (e.g. checking, correcting, signing of payments)
- Online information on connected accounts

### 5. Wide range of services and functions

### Basic functions – active

- Submission of domestic payment orders (standard payments, fast payments, express payments only 1 possibility for urgent, collection request, transfers between accounts access for which the user is authorised, standing orders, collection authorisations)
- Uploading of domestic and foreign payment orders from a file created by the accounting system and convenient subsequent processing of those payment orders (formats ABO, Clearing, Gemini, MultiCash format and CSV format – only BusinessNet Professional)
- Submission of foreign payment orders (standard, urgent payments, SEPA payments, standing orders)
- Term deposits

Basic functions – passive

- Current account balances with the possibility of aggregating them
- Transactions history
- Statements of accounts kept with other banks, delivered through MT940/MT942, with the possibility of exporting to the accounting system (BusinessNet Professional only)
- Cash Management function overview of closing balances on accounts kept with the Bank and for accounts kept with other banks, with a possibility of aggregating the balances (BusinessNet Professional only)
- Possibility of granting access to accounts held by multiple business entities to a single user (utilising a single access profile and security calculator), with a high level of user comfort
- Possibility of establishing structured signature authorisations (including use of transaction limits) at the account level
- Great flexibility in setting user rights at the account level
- Possibility of creating payment order templates and databases of business partners and sharing them with other users
- Wide range of options for customising the service favourite pages, designation of a preferred account, etc.
- Possibility of exchanging messages between the Bank and user
- Archiving of payment orders list of authorised (signed) transactions submitted to the Bank for processing
- Information on payment cards
- Information on securities and information about branch and ATM and exchange rates of the Bank

#### 6. Recommended technical requirements

- Operation system: MS Windows 2000, XP
- Internet browser: Microsoft Internet Explorer version 6.0 or higher, Firefox 1.5 or higher
- Screen resolution: 1024 x 768 font size normal (Windows)

- JavaScript: enabled
- Session cookies: enabled
- Java: optional for greater convenience in uploading data from the accounting system: Java enabled, applet version MS Java or JDK 1.4
- Other: Adobe Acrobat Reader 6.0 or higher

## Slovenia

### E-BANK

**E-Bank** is a local electronic banking system developed by a Slovenian software company. Although it is one of five local electronic banking systems it has a higher market penetration. This product is offered by the Bank alongside MultiCash.

### 1. Product description

 E-Bank is a Slovenian product, developed by the software house Halcom Informatika d.o.o., Ljubljana (http://www. halcom.si). The system is client-server based and the customer needs a special "client" program to communicate with the bank server. E-Bank is very user friendly and enables the transacting of domestic and international payments, the receipt of an overview of the accounts, daily transactions and statements, exchanging messages and files with the bank using a secure channel and the building of very sophisticated data exchange interfaces with the company's accounting system

- The system also has a very good archive of sent payment orders, messages and files. E-Bank is a multi banking system and enables customers to manage accounts opened in all banks in Slovenia which support it
- E-Bank permits stand-alone installations (all users use one PC under their individual user profiles) or a network installation (users have their own client installations on their own PCs, but also other users can log onto this installation under their profiles). E-Bank uses MS Access database in a stand-alone installation and IBM DB2 in a network installation
- The communication between the company and the Bank is possible via Internet (TCP/IP) or telephone lines (analogue or ISDN).
- E-Bank allows also a direct business-to-bank connection (B2B E-Bank) where the data exchanged between the bank and the company and between the company accounting system and E-Bank is completely automated and almost in real time
- The user interface is very user friendly and intuitive.
   E-Bank therefore needs little training and helpdesk support. The distribution of new releases and patches is also very simple. Users can download new releases from the bank server, and the bank can send small patches directly to all clients

- Distributed (remote) electronic signature and using XML forms is also possible
- The system also offers ICM (International Cash Management) module which allows the customer to send MT101 messages via E-Bank into EuropeanGate or SWIFT

### 2. Customer profile

This product is suitable for all types of companies. It is especially recommended for companies which hold accounts with different Slovenian banks. With some modifications, the system can also be used to manage accounts opened in BiH. E-Bank meets companies' requirements for a highly automated system for the smooth exchange of data with the bank.

### 3. Security

- The security of E-Bank is built on the Public Key Infrastructure (PKI). All users of the E-Bank system have to log in with their own digital certificates which are stored on a smart card or USB stick. Halcom CA, the Certificate Authority established by Halcom Informatika d.o.o., issues the digital certificates and the electronic signature keys. All banks offering E-Bank are sub-contractors of Halcom CA. A Smart Trust system is used to generate digital certificates and electronic signature keys. Halcom CA is the only company authorised to issue digital certificates; it is registered at the Ministry of Information Society
- This type of security architecture permits users to manage all accounts for which they have authorisation in all banks supporting E-Bank with only one smart card. A PIN (Personal Identification Number – a personal "password") secures the digital certificate on the smart card of the user. User identification is carried out via the digital certificate locally on the client's as well as on the bank's server when data is sent or collected
- The electronic signature keys comprise 1024 bit. All payment orders, messages or files which are sent by the client to the bank, or vice versa, are digitally signed by the private keys or bank. The communication protocol used is similar to FTP. Moreover, the communication is secured through SSL encryption

### 4. Your benefits

- Faster, more efficient and cheaper execution of domestic and international payments
- Lower administration costs in companies
- Lower bank fees
- Electronic payments (i.e. paperless)
- Interface to the company's information system
- Time saving
- Forward valued payments
- Almost real-time (with a 15–30 minutes delay) information about intraday entries on accounts
- Help desk support available

- Clear review of transaction history
- Simple upgrading (download of new software release)

### 5. Advantages of this product

- Communication network with a number of other Slovenian banks
- Very user friendly
- Time saving, independence of bank opening hours
- Payment orders are strictly checked in accordance with the rules of Bank Slovenia
- Interfaces to other programs facilitate operational work
- Help desk

### 6. Recommended technical requirements

- Windows 2000 / 2003 / XP / Vista and Win7
- Minimum of 200 MB free hard disc storage (1 GB recommended)
- PC 550 MHz with min. 128 MB RAM (1,6 GHz 32bit processor and 512 MB RAM recommended) for 2000/2003 and XP
- PC 800 MHz with min. 512 MB RAM (2,0 GHz 32bit processor and 1 GB RAM recommended) for Vista and Win7
- Free COM port of USB port (for smart card reader)
- Modem or access to Internet

### 7. Market position

E-Bank is the leading electronic banking system in Slovenia. Over 80,000 companies currently use it, with the numbers increasing.

## Turkey

### BANKOTM

**BANKO<sup>™</sup>** is a PC-based software for bulk transactions. Clients send their data files, including their local money transfers through BANKO<sup>™</sup>. The software can even enable users to create the payment files. Moreover, in a secure environment the customer can transmit payment order files (.txt) downloaded from ERP in YTL (local currency) to any beneficiary/account at any local bank. Payment orders in FX can also be processed through BANKO<sup>™</sup> if the beneficiary holds accounts at the Bank. Data exchange for cheques to be cleared through the Bank can also be processed through BANKO<sup>™</sup>.

### 1. Product description

BANKO<sup>™</sup> was introduced in the Bank in 2004.

The main functions of BANKO<sup>™</sup> are

- Local Payments there are two ways of executing local payments via BANKO™
  - If the client's applications are capable of generating a txt file for local payments, this file can easily be sent to the Bank via BANKO<sup>™</sup>. There is no one file format,

in other words the file format is flexible as long as the minimum data required (e.g. beneficiary account number, etc.) for executing a payment are in the file. After the transactions have been executed, a reconciliation (status feedback) file is sent via BANKO<sup>™</sup> to the user

- If the client's applications are not able to generate a txt file, the user can prepare the payment orders in BANKO<sup>™</sup>. The user can upload the beneficiary database to or prepare it in BANKO<sup>™</sup>. Having selected the beneficiary by filling in the remaining fields, payment orders can easily be prepared. Once the transactions have been executed, the user will receive the status info via BANKO<sup>™</sup>
- Cheque Clearing clients can use this application to send the cheque information which will be cleared at the Bank. The option of loading a txt file or preparing the data manually are also available
- BANKO<sup>™</sup> has been designed as a platform which enables the clients to execute bulk transactions. New products will therefore be added to the product range. BANKO<sup>™</sup> can be integrated into the client's computer network or installed on a stand-alone PC.

Once the client transmits the payment orders to the Bank, there are three ways in which the execution of transactions can be authorised. The clients select one of them at the set-up stage

- Online via the Bank's Internet banking application with PKI technology
- With the printed payment order, authorisation can be given by the Bank
- No second authorisation, real-time online execution.

### 2. Customer profile

This product is especially useful to corporate clients who execute more than ten local payments or cheque collection transactions per day.

### 3. Security

- Licensing once BANKO<sup>™</sup> has been installed the programme has to be licensed. The license file is downloaded once from the Bank's Corporate Internet banking application of the client. The license file includes client-specific information. The client must therefore be a Corporate Internet banking application user of the Bank
- Physical / hardware checks & controls BANKO<sup>™</sup> only operates on the defined computers of the clients
- Data file controls CRC check and data encryption
- Client user password for entry with different authorisation levels (per user and per modules)
- SFTP for file transfers
- Digital signature compatible

### 4. Your benefits

- Independence from bank opening hours
- Liquidity control through display of account balances, turnover per value date and drawing possibilities
- Assistance in payment transactions and cash management
   on a domestic basis
- High level of security through data encryption
- Use of digital signature
- Data transmission via SFTP

### 5. Recommended technical requirements

- BANKO<sup>™</sup> runs on individual workstations / network installations from CD ROM
- Windows 95/98/Me/NT/2000/XP at minimum
- Pentium Celeron 600 or Pentium II 400 processor at minimum
- 32 MB RAM and 150 MB free disc space at minimum

### 6. Market position

As of today, more than 1,100 corporate clients use BANKO<sup>™</sup> for their bulk local payments. With a monthly transaction volume of more than 550,000, around 65 % of the money transfers of corporate clients are executed via BANKO<sup>™</sup>

## Ukraine

### IFOBS

The client-bank system **iFOBS** (integrated Front-Office Banking System) is a web-based solution and offers services which enable the online exchange of financial and other date between bank and clients using computer and telecommunications technology.

### 1. Product description

iFOBS, available in an online and offline version, has an userfriendly interface, along with diagnostic message and help systems. It does not require special computer skills to operate it.

### 2. Security

Using iFOBS requires an Internet connection and uses SSL protocol. Access to the system is also possible through a direct dial-up connection with the Bank using an asynchronous modem that is connected to PSTN (Public Switched Telecommunication Network). iFOBS meets the modern requirements placed on information security. A personal authentication password, digital signature for every user of the client and flexible user rights management system are provided. Encryption of data traffic between the Bank and the client's PC has been implemented to avoid unauthorised accessing of the data.

### 3. Your benefits

iFOBS provides clients with the following functionalities

- Processing payment orders in both national and foreign currencies
- Foreign currency purchase / sale orders and conversion
- Orders for distribution of incoming FCY proceeds
- Monitoring the status of the transferred payment documents
- Monitoring current accounts balances, including incoming payments
- Constant access to the accounts statements, current status and history over a requested period of time
- Access to documents processed in the Bank's archive for requested date or period of time in the past
- Exchanging messages and files with the Bank
- Selecting the screen interface language (Russian, English, Ukrainian)
- Generating of a private password and digital signature key by the user without assistance
- Built in export/import interface for payments in the national currency for the purpose of exchange with other applications

• Definition of the competence level for a specific transaction amount

### 4. Recommended technical requirements

- IBM compatible personal computer
- OS Windows XP SP2 (or Windows 2000 SP4)
- Internet browser MS IE 6.0 or 5.5
- Adobe Acrobat Reader 7
- J2SE Java Runtime Environment (JRE) v. 1.3.X–1.5.X

60

# Ukraine – UKRSOTSBANK

### IBANK 2UA

The **iBank 2UA** system (integrated front-office banking system) is a PC-based solution designed to provide electronic banking services. The system was developed by the well-known company "BIFIT" and is already used by more than 500 banks in Ukraine and Russia.

### 1. Product description

"iBank 2UA" is available in an online and offline version. They are fully identical and support the same user interface, directories, types and forms of documents.

### 2. Customer profile

The product is suitable for both domestic and international corporate clients who are looking for an electronic solution to settle payments and to manage their accounts held with the Bank.

### 3. Security

"iBank 2UA" guarantees the highest level of safety

 Electronic digital signature for electronic documents of the clients

- Mechanism of coding and integrity for posting
- Crypto library certified by the State Security Service for Special Communication and Information Protection corresponds to current Ukrainian legislation
- Flexible control of the clients' rights and rights of their employees

### 4. Range of services

"iBank 2UA" offers to use the following functionalities

- Payment orders in national and foreign currencies
- Foreign currency purchase, sale, exchange
- Permanent access to the reporting: account statement, interim transaction report
- Additional module for salary projects
- Possibility of having the system interface with accounting software through the export and import of documents
- Exchange of confidential messages with file attachments
- Additional module Multiclient possibility to create and sign all payments on behalf of subsidiary companies for the group of companies.
- Acquiring module
- Export and import of documents
- Monitoring of payment order processing

- Multi-language interface
- Possibility to define the competence level for a specific transaction amount

### 5. Your benefits

- World-wide availability
- Real-time working with the Bank
- High level of security through the Electronic signature card or Smart card and password
- Saving on administration costs: electronic payments (i.e. paperless)
- ndependence from bank opening hours

### 6. Recommended technical requirements

- Windows XP/Vista/2000/2003/7/2008
- Internet browser MS IE 6.x or 7.x, Mozilla 1.4+, Firefox, Opera
- Java Virtual Machine (SUN, from version 1.4.X- 1.6.X)

## Electronic B@nking Systems – Overview

### MULTICASH AND / OR LOCAL ELECTRONIC B@NKING SOLUTIONS OFFERED BY OUR BANKING GROUP'S UNITS

Country & Unit	Network Product MultiCash (MC)			Local EB Solution
	MC offered	MC connectivity	MC@SIGN Internet-based distributed signature	Offered parallel to MC
Austria				
UniCredit Bank Austria	Yes	Modem, ISDN, TCP / IP <sup>1</sup>	Yes	BusinessLine, BusinessNet
Bosnia & Herzegovina				
UniCredit Bank D.D.	No			HALCOM, e-ba Plus
Bulgaria				
UniCredit Bulbank	Yes	Modem, TCP/IP <sup>1</sup>		TeleBANK, Bulbank Online
Croatia				
Zagrebačka Banka	Yes <sup>2</sup>			e-zaba Internet banking

	Network Product MultiCash (MC)			Local EB Solution
	MC offered	MC connectivity	MC@SIGN Internet-based distributed signature	Offered parallel to MC
Czech Republic				
UniCredit Bank Czech Republic, A. S.	Yes	Modem, ISDN, TCP/IP <sup>1</sup>	Yes	BusinessNet Eltrans 2000
Germany				
UniCredit Bank AG	Yes	ISDN, TCP/IP <sup>1</sup>		HVB eFIN HVB global TRXnet UC eBanking prime
Hungary				
UniCredit Bank Hungary	Yes	Modem, ISDN, TCP/IP <sup>1</sup>		Spectra SpectraNet SpectraNet Mobile Banking
Italy				
UniCredit Corporate Banking	No			UniWeb, TLQ Corporate banking
Poland				
Bank PEKAO	Yes <sup>2</sup>	Modem, ISDN, Access Server, VPN		PekaoBIZNES <sup>24</sup> PekaoBIZNES <sup>24</sup> inoffice
Romania				
UniCredit Tiriac SA	Yes	Modem, TCP/IP <sup>1</sup>	Yes	BusinessNet
Russia				
ZAO UniCredit Bank	No			Online banking
Serbia				
UniCredit Bank Serbia	Yes	TCP/IP <sup>1</sup>	Yes	E-Bank, BusinessNet Professional
Slovakia				
UniCredit Bank Slovakia A.S.	Yes	Modem, ISDN, TCP/IP <sup>1</sup>	Yes	BusinessNet
Slovenia				
UniCredit Bank Slovenija	Yes <sup>2</sup>	TCP/IP <sup>1</sup>		E-Bank
Turkey				
YapiKredi	No			BANKO™
Ukraine				
UniCredit Bank Ltd.	No			iFOBS (online and offline version)
Ukrsotsbank	No			iBank 2UA

<sup>1</sup> TCP/IP = Transmission Control Protocol/Internet Protocol
 <sup>2</sup> MC orders in country specific format, which are coming from another groupinternal MC-entry point and are transported via EuropeanGate can be processed.
 <sup>3</sup> Internet Based MultiCash@SmartOffice

## EuropeanGate – Overview

Country	EG Offered	EG – Single Point of Entry <sup>1</sup>	EG – Target Location <sup>1</sup>
Austria	Yes	Yes	Yes
Bosnia & Herzegovina	Yes	No	Yes
Bulgaria	Yes	Implementation planned	Yes
Croatia	Yes	Implementation planned	Yes
Czech Republic	Yes	Yes	Yes
Germany	Yes	Yes	Yes
Hungary	Yes	No	Yes
Italy	Yes	Yes	Yes
Poland	Yes	Yes	Yes
Romania	Yes	Yes	Yes
Russia	No	No	Implementation planned
Serbia	Yes	No	Yes
Slovakia	Yes	Implementation planned	Yes
Slovenia	Yes	Yes	Yes
Turkey	Yes	No	Yes
Ukraine	No	No	Implementation planned

<sup>1</sup> EuropeanGate provides our customers with access to all UniCredit banks via one single point of entry. Those banks, to where customers can send their orders to be distributed to the account holding bank are listed as "single point of entry". UniCredit banks, which hold the account of the ordering party and are interfaced with EuropeanGate to receive payment orders for further processing are defined as "target location" (independant whether they are single point of entry or not).

UniCredit Bank Austria AG 8242 / Cash Management Schottengasse 6–8 1010 Vienna Austria

Editor: Cash Management Phone: + 43 (0) 5 05 05 ext. 55446 Fax: + 43 (0) 5 05 05 ext. 8955446 e-Mail: silvia.kornherr@unicreditgroup.at

This brochure is intended for clients of UniCredit who are market counterparties or business investors. It is not intended for use by any other person. In preparing this brochure, several sources of information have been used which we consider to be reliable. All information is provided solely on the understanding that neither any member of UniCredit nor its employees shall be liable for any errors, inaccuracies or incomplete information contained in this brochure. Under no circumstances shall any information provided be considered as legal or investment advice. This brochure does not constitute a solicitation to buy or an offer to sell any securities. Any opinions herein reflect our judgement on this date and are subject to change without notice.