

CENTRAL BANK OF CYPRUS

**BANKING COMMITTEE FOR THE
STANDARDISATION AND APPLICATION OF IBAN**

**HANDBOOK FOR THE STANDARDISATION AND
APPLICATION OF**

Basic Bank Account Number (BBAN)

And

International Bank Account Number (IBAN)

IN CYPRUS

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1. INTRODUCTION

With the introduction of EURO in most European Countries, it has become imperatively necessary to harmonize the transactions of Financial Institutions within the member states of the European Union, with emphasis on cross border payments.

Each member state represents a controlled environment and therefore each financial institution is aware and follows that country's rules and regulations.

Today the majority of the European states include in almost all the internal transfers the bank identification codes and verification codes for the correctness of the account number.

The accurate inclusion of bank code and account number makes the internal transfers almost 100% correct. All the details which are necessary for the completion and verification of the transfers are given by the sender to the recipient Bank. Such information is not usually given in cross border payments.

In cross border payments it is not easy to copy the conditions of international controls due to the differences each state adheres to. The customers and especially the middle size companies are confused when they receive invoices from abroad. They are not used to the different presentations of invoices from financial institutions deriving from different states within the Union.

As a result the information given on transfers in many cases is incomplete and not useful for the operational function of straight through processing of payments on cross border transfers.

Inevitably this results in high costs as manual intervention is needed. While cross border payments are on the increase in relation to internal transfers, there is an urgent necessity to reduce the costs, increase speed of execution and quality. Such improvements require a specific method that will assure the correct interpretation and easy verification of the foreign account numbers.

Therefore for better functioning of cross border payments, it is imperative that the application of a uniform method which will be easily understood and will enable the verification of account numbers that exercise cross border payments be applied.

In this respect the European Committee for Banking Standards (ECBS) issued in 1997 EBS 204, a Standard which incorporates not only all the requirements of ISO 13616 but also all supplementary features agreed on a European level.

2. THE MEANING OF IBAN

IBAN (International Bank Account Number) is a standardized and electronically recognizable format of a Bank Account. It is calculated and verified by a precise method and rules in its printed as well as its electronic format. The IBAN standardization was considered necessary so as to solve cross border problems. Europe adopted it as an aid towards the use of a common currency and for facilitating the operation of an “INTER-EURO” system of payments, based on “automatic processing” (STP- Straight Through Processing) of cross border payments.

IBAN has the following characteristics:

- Alphabetic characters are denoted with uppercase letters.
- The IBAN is fixed in length for each country code prefix.
- The Financial Institution identifier within the IBAN is fixed in length and fixed in position, for each country code prefix.
- It is denoted in a standardized printed and electronic format.

The use of IBAN for cross border payments has been adopted in the European Union since 1.1.2002 following the decision of the European Parliament which was made known to the European Commission and the European Central Bank. This was also in accordance with the relevant undertaking of the European Banking Association.

The European Committee for Banking Standards (ECBS) and the SWIFT administration reached an Agreement for the use of IBAN by SWIFT.

Relevant references to the IBAN standard in various publications by ECBS may be found on their Web Site at **www.ecbs.org**

The IBAN standard is based, amongst others, on the following standards:

- ISO 3166: Codes for the representation of countries
- ISO 7064: Data processing-Check character System
- ISO 13616: Banking and related services – IBAN

3. DEFINITIONS

Financial Institution (F.I.)

Any institution that applies the IBAN standard in Cyprus, including the Central Bank of Cyprus, the Cyprus Co-operative Societies and the International Banking Units.

BBAN

BBAN stands for **Basic Bank Account Number**.

BBAN is a series of alphanumeric characters comprising the code number of the Financial Institutions and their branches in each country and the Customer account number. BBAN is part of IBAN.

CYBIC

CYBIC stands for **Cyprus Bank Identification Code**.

This is the Code Number for the identification of Cypriot Financial Institutions and their Branches. It consists of eight (8) numerical characters of which three (3) refer to the code of the Financial Institution and five (5) to the code of the Branch or Co-operative Society.

IBAN

IBAN stands for **International Bank Account Number**.

IBAN is an extension of BBAN and is used internationally for the identification, by any Financial Institution, of a customer account.

ECBS

The **European Committee for Banking Standards**.

ECB

The **European Central Bank**.

ISO

The **International Standards Organization**.

STP

STP stands for **Straight Through Processing** which conveys the procedure for the automatic processing of cross border transfer of funds. This starts by debiting the account of the ordering customer and is completed by crediting the beneficiary's account without human intervention.

4. ADVANTAGES

The basic advantage of IBAN is the facility of automatically processing the accounts of each Financial Institution in each country, mainly during cross border bank transactions. That is to say the verification of the correct recording of the account number by means of check digits produced and verified by an internationally acknowledged standardized procedure. IBAN promotes a more productive Banking System with improved services as it facilitates the:

- standardization of bank accounts
- identification of the correctness of Bank Accounts
- the verification of the correctness of Bank Accounts
- improvement in the servicing of customers
- automation of transaction processing (STP)

while at the same time it achieves:

- reduction in human errors
- speed in executing transactions
- reduction in the cost of processing transactions.

5. SCOPE

IBAN is applied for all bank accounts and not only deposit accounts.

IBAN, at country level, can be applied on the following documents, messages and procedures:

- Documents to the client
- Deposit books and advices
- Statements of accounts (in printed and electronic format)
- Personal and Bank cheques
- Commercial documents
- ATM receipts
- E-Banking
- Cross border procedures regarding transfer of funds
- Interbank (local) procedures in the transfer of funds.

IBAN contains all the necessary information (e.g. Financial Institution code and account number) for the easy flow of a payment order as well as for interbank transactions through a National Clearing System thus reducing the possibility of erroneous execution of a transaction.

However, because at present there is very little information on the standardization of IBAN on a global basis, it will require considerable effort and time for IBAN to be used by the majority of Financial Institutions for

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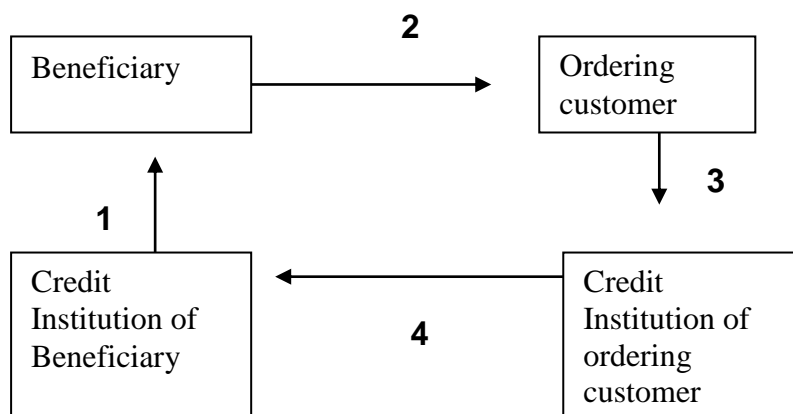
global cross border payments. For these reasons, IBAN will at present be used for SWIFT messages, along with BIC (Bank identification Code.)

6. DESCRIPTION OF THE APPLICATION OF IBAN

The presentation of an account in the format required by the IBAN standard, will apply for all bank transactions that involve the use of the account.

Credit institutions and their clients are involved in the implementation of IBAN in a transfer of funds, in two different ways:

- In the creation of IBAN by the financial institution and its notification to the client (a process that will be made only once).
- In processing IBAN (localizing, recognizing, processing, verifying, transferring)



1. The IBAN is made available to the beneficiary by its credit institution.
2. The IBAN of the beneficiary is forwarded to the ordering customer by such means as invoices, international payment instructions, letterheads, etc....
3. The ordering customer submits a cross border transfer order (for the credit of an account) which includes the IBAN of the beneficiary.
4. The cross border credit transfer message includes the beneficiary's IBAN, which has been validated by the ordering customer's financial institution. After receipt of the message by the beneficiary's financial institution, the beneficiary's account will be credited.

7. STRUCTURE OF THE IBAN / EXAMPLE

The accounts that follow the IBAN standard must have a fixed length and structure for each country. The countries of the European Union and other European countries that have adopted the standard are shown on table IBAN TR 201 of ECBS that can be found on the web page of the ECBS.

IBAN can be represented in the following two formats:

7.1 Electronic format

This is the IBAN format which is used for Electronic business transactions. The Electronic format of IBAN in Cyprus is made up of 28 consecutive alphanumeric characters and its structure contains the following successive parts:

- Country code: 2 capital letters which identify the country, as specified in ISO 3166 (Table 2), in which the Credit Institution and the office maintaining the IBAN are located.

For Cyprus, this code is CY.

- Check digits: 2 digits which are calculated as described in ISO 7064 (chapter 10 of this manual)
- Basic Bank Account Number (BBAN): BBAN has a fixed number of characters for each country. For Cyprus, the BBAN has been fixed at 24 characters and includes the following:
 - The identification code of the credit institution / branch at a specific position in relation to the beginning of the BBAN. This code is called CYBIC (Cyprus Bank Identifier Code).
 - The client's account number containing one or more control digits that the credit institution calculates and uses.

Where alphabetic characters are used in the structure of BBAN, these are always shown in capital letters.

7.2. Printed Format

The printed format of IBAN, that is, its printed (non-electronic) representation, is the same as the electronic format with the following exception:

- The IBAN must be divided into groups of four characters, each group separated by an empty space of one character. The last group may have a variable length of not more than four characters.

Example

In the example the 'electronic' and the 'printed' formats of a Cyprus Bank Account and a Greek Bank Account are presented.

Country	CY	GR
Account Number	099001280000001200527600	01101250000000012300695
IBAN Electronic format	CY17099001280000001200527600	GR1601101250000000012300695
IBAN Printed format	CY17 0990 0128 0000 0012 0052 7600	GR16 0110 1250 0000 0001 2300 695

8. THE ROLE OF THE CREDIT INSTITUTIONS

In accordance with the timetable on Attachment 1, Credit Institutions should be able on 1.4.2004 to create, receive, recognize, elaborate, verify and transmit the IBAN, at least during the execution process of cross border transfers.

Within the above framework, each Credit Institution is responsible for the following:

- The initial generation of IBANs (Figure 1) and their notification to its customers.
- Providing information to each of its customers on the use of IBAN
- Training its employees
- Printing IBANs on the various forms and other bank transactions documentation.
- Using IBAN in electronic messages.
- Verifying IBAN on receipt, before using it on outward and inward cross border remittances that contain an IBAN.
- Supplying adequate information on the transfer of IBAN during cross border transactions (figure 2).

Especially for cross border payments, it is noted that, the credit institution that handles the client's account is responsible for the generation of the IBAN and for its notification to its client in order for him to provide it to his commercial partners.

The means of notifying IBANs to credit institution clients may include the use of the INTERNET, where, through the website of each credit institution or its e-Banking facility IBANs may be created and transmitted.

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Where a credit institution receives an order from one of its clients for a transaction with the use of IBAN, it must verify it before completing the transaction by using the common verification algorithm.

Figure 1: Initial generation of the IBAN and client notification

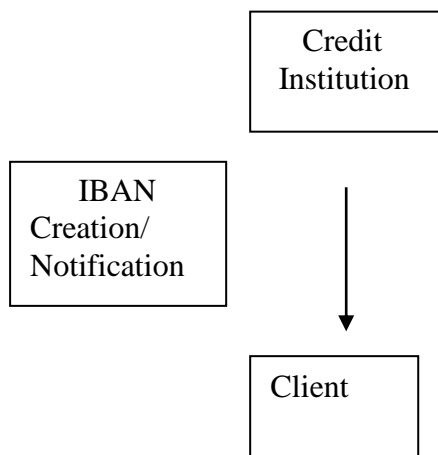
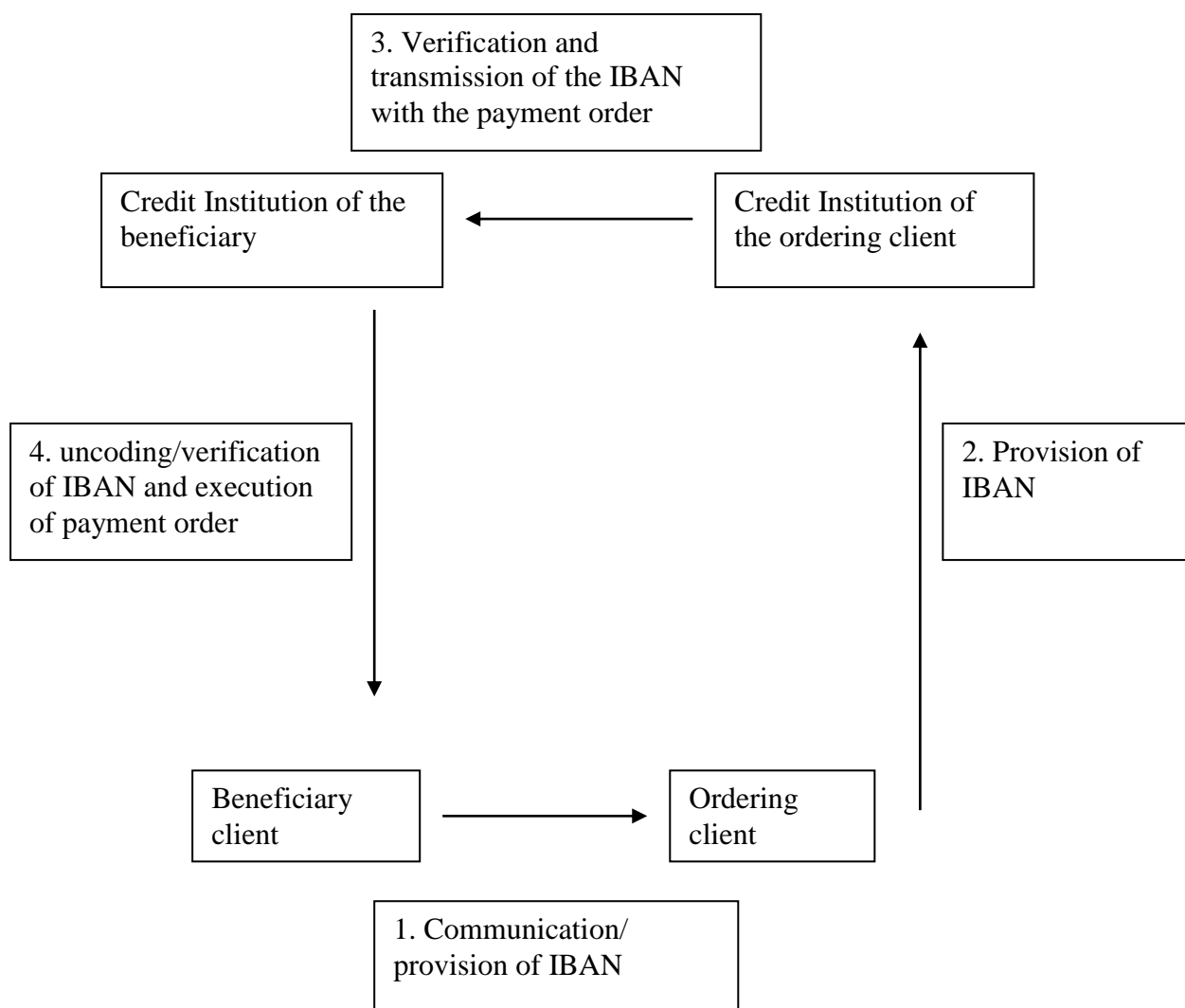


Figure 2: Use of IBAN in a cross border payment



9. APPLICATION OF THE BBAN AND IBAN STANDARDS IN CYPRUS

The application of the BBAN and IBAN standards in Cyprus is presented and codified in this manual.

9.1 Application/ standardization of BBAN in Cyprus

Basic Bank Account Number (BBAN)

Basic Bank Account number is the standardized representation of each customer's account, maintained with a Credit Institution within Cyprus.

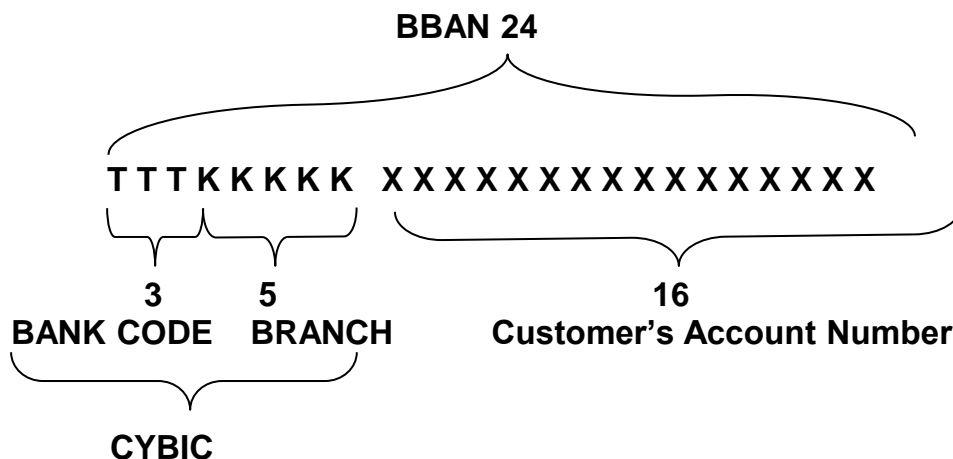
The BBAN for the Cyprus banking system is composed of six consecutive sections:

- **The Credit Institution/ branch Identification code in a specific position in relation to the beginning of the BBAN. This code is called CYBIC (Cyprus Bank Identifier Code).** For Cyprus, the Identifier code is composed of **eight (8)** digits out of which the **first three (3)** identify the credit institution and the remaining **five (5)** digits identify the credit institution branch at which the account is held.
- **The customer's account number with one or more check digits that the credit institution calculates and uses. For Cyprus, the size of the customers' account number is fixed at sixteen (16) digits.**

Where credit institutions use less than sixteen (16) digits for their customers' account numbers the sixteen (16) digits will have to be completed with leading zeros.

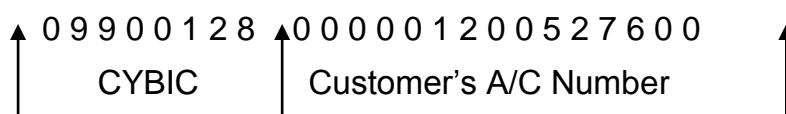
The following chart portrays the 24 digits of the BBAN which includes the credit institution and its branch identification code and the customer's account number

Schematically, the format of the BBAN in Cyprus is as follows:



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Example of the BBAN format of an account with Bank X (099) –Branch (0128)



9.2. Application/ Standardization of IBAN in Cyprus

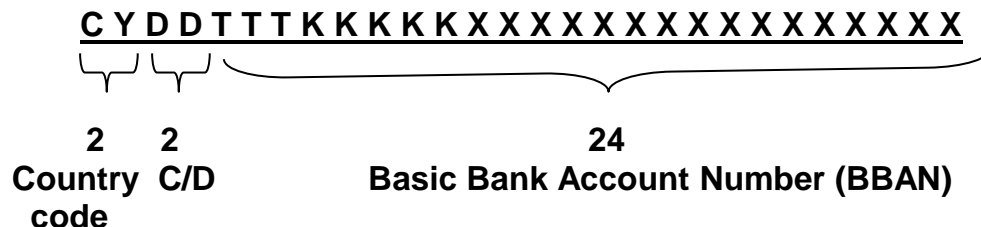
Having regard to the fact that the BBAN format in Cyprus has a fixed length of 24 digits, then the format of IBAN will be fixed at 28 digits and will consist of the following:

IBAN format : **CYDDBBAN** with a fixed length of 28 digits

where

- **CY** : The letters **CY**, denoting the code for Cyprus according to ISO 3166.
- **DD** : 2 check digits according to ISO 7064-1983
- **BBAN**: 24 digits according to the format described in section 9.1.

Schematically, the format of IBAN will be as follows:



Examples

1. Account with Bank X (**099**)- Branch (**0128**)

IBAN 28 digits

Country	CY
Check Digit	DD
Customer Account Number	1200527600
Electronic IBAN	CYDD099001280000001200527600
Paper IBAN	CYDD 0990 0128 0000 0012 0052 7600

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2. Account with Bank Y (098)- Main Branch (001)

IBAN 28 digits

Country	CY
Check Digit	DD
Customer Account Number	21987654
Electronic IBAN	CYDD098000010000000021987654
Paper IBAN	CYDD 0980 0001 0000 0000 2198 7654

10. CALCULATION MODE OF THE IBAN CHECK DIGITS

Assuming that we want to convert the account number (BBAN) 099001280000001200527600 of a financial institution in Cyprus into an IBAN .

Preliminary step:

We create an artificial IBAN composed of the country code (Table 2, Page22) followed by “00” and the BBAN: **CY00099001280000001200527600**.

Step No. 1

We move the first four digits “CY00” to the end of the number so as to have: **099001280000001200527600CY00**.

Step No. 2

We convert the letters to numbers using the conversion Table 1 (page 21) and this gives us: **099001280000001200527600123400**

Step No. 3

We divide the first 9 digits of the number by 97 and calculate the remainder. **099001280:97** gives us a remainder of **73**.

Step No. 4

We replace the digits **099001280** with the remainder **73** thus having the number **73000001200527600123400**.

Step No. 5

We repeat step No. 3 with the first 9 digits of the number that we get in step 4. **730000012 : 97** gives a remainder of **31**.

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Step No. 6

We replace the digits **73000012** with the remainder **31** thus having the number **3100527600123400**.

Step No. 7

We repeat step No. 3. **310052760: 97** gives a remainder of **20**.

Step No. 8

We replace the digits **310052760** by the remainder **20** and this gives us the number **200123400**.

Step No. 9

We repeat step No. 3 on the last remaining 9 digits. **200123400: 97** gives a remainder of **81**.

Step No. 10

We subtract this final remainder 81 from 98. **98-81=17**.

The digits 17 provide the required Check Digits of the Cypriot account number 099001280000001200527600.

Accordingly, the IBAN of this Cypriot account number is:

CY17099001280000001200527600

11. VALIDATION OF THE IBAN CHECK DIGITS

Assuming that we want to validate the Check Digits of the following IBAN:

CY17099001280000001200527600

This number could be given to us either in electronic IBAN format, being

CY17099001280000001200527600

or in paper IBAN format, being,

CY17 0990 0128 0000 0012 0052 7600

In order to verify the Check Digits of the above-mentioned account number we follow these steps.

Preliminary step:

If the IBAN was given in paper format we convert to electronic format by deleting all empty spaces and any non-alphanumeric characters. After that the number will appear as follows:

CY17099001280000001200527600

Step No. 1

We move the first 4 digits “**CY17**” to the end of the number which gives us
099001280000001200527600CY17

Step No. 2

We convert the letters to numbers using the conversion table 1 (page 21) which gives us

099001280000001200527600123417.

Step No.3

We divide the first 9 digits of this number by 97 and calculate the remainder. **099001280: 97** give a remainder of **73**.

Step No. 4

We replace the digits **099001280** by the remainder **73** thus having the number **73000001200527600123417.**

Step No,5

We repeat step No. 3 on the number that resulted from step 4.
730000012: 97 gives a remainder of **31**.

Step No. 6

We replace the digits **730000012** by the remainder **31** and get the number **3100527600123417.**

Step No. 7

We repeat step No. 3 on this number. **310052760 : 97** gives a remainder of **20**.

Step No. 8

We replace the digits **310052760** by the remainder **20** and have the number **200123417.**

Step No. 9

Finally we repeat step No. 3 on the remaining 9 digits. **200123417:97** gives a remainder of **1**.

Since the remainder we have at the end of this exercise is “1”, the Check Digits “17” of the Cypriot IBAN are validated and consequently we accept the correctness of the number that was given to us.

12. EXAMPLES OF THE CALCULATION OF THE IBAN CHECK DIGITS

12.1 Example of the calculation of the check digits of a Greek IBAN

Assuming that we want to convert to an IBAN, the Greek account number (BBAN): **0110125000000012300695**.

Preliminary step:

We create an artificial IBAN, composed of the country code (Table 2, page 22) followed by “00” thus having the following number **GR000110125000000012300695**

Step No. 1

We move the first four digits “GR00” to the end of the number which gives us the number **0110125000000012300695GR00**

Step No.2

We convert the letters to numbers in accordance with the conversion Table 1 (page 21) and have: **0110125000000012300695162700**

Step No.3

We divide the first 9 digits of the number by 97 and calculate the remainder. **011012500 ÷ 97** gives us a remainder of **90**.

Step No.4

We replace the digits **011012500** with the remainder **90** and we have the number **900000012310695162700**.

Step No.5

We repeat Step No.3 on the first 9 digits of the number we get in step 4. **90000001 ÷ 97** gives us a remainder of **51**.

Step No.6

We replace the digits **90000001** with the remainder **51** and we have the number **512300695162700**.

Step No.7

We repeat step No.3. **512300695 ÷ 97** gives a remainder of **45**.

Step No.8

We replace the digits **512300695** with the remainder **45** and we have the number **45162700**.

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Step No.9

We repeat Step No.3 on the whole number that resulted in step 8. **45162700 ÷ 97** which gives a remainder of **82**.

Step No.10

The remainder in step 9 i.e. **82**, is deducted from 98. **98-82 = 16**.

**The digits 16 are the check digits of the
Greek Account 0110125000000012300695**

**Therefore the IBAN of the Greek Account is
GR160110125000000012300695**

12.2 Example of the validation of the check digits of a Greek IBAN

Assuming that we want to validate the check digits of the Greek IBAN **GR160110125000000012300695**

The number will be given to us either in electronic format, which will be **GR 160110125000000012300695**, or in paper format, which will be **GR16 0110 1250 0000 0001 2300 695**.

In order to validate the check digits of the above number we take the following steps:-

Preliminary Step

If the IBAN is given to us in paper format we convert to electronic format by deleting all the empty spaces and any non-alphanumeric characters. The number will then appear as follows **GR160110125000000012300695**.

Step No.1

We move the first four characters '**GR16**' to the end of the number and have **0110125000000012300695GR16**.

Step No.2

We convert the letters to numbers using the Conversion Table1, (page 21) and we have **0110125000000012300695162716**.

Step No.3

We divide the first 9 digits of the above number by 97 and calculate the remainder. **011012500÷97** gives a remainder of **90**.

Step No.4

We replace the digits **011012500** with the remainder **90** and we have the number **9000000012300695162716**.

Step No.5

We repeat Step 3 on the first 9 digits of the number resulting from step 4. **900000001 ÷ 97** gives a remainder of **51**.

Step No.6

We replace the digits **900000001** with the remainder **51** and we have the number **512300695162716**.

Step No.7

We repeat Step No.3 on the first 9 digits of the number resulting from step 6. **512300695 ÷ 97** gives a remainder of **45**.

Step No.8

We replace the digits **512300695** with the remainder **45** and we have the number **45162716**,

Step No.9

We finally repeat Step No.3 on the number resulting from step 8. **45162716 ÷ 97** giving a remainder of **1**.

Given that the final remainder is '1' then the check digits '16' of the Greek IBAN are correct and therefore we accept the correctness of the number given to us.

12.3 Example of the calculation of the check digits of a French IBAN

Assuming that we want to convert to IBAN the French Account number (BBAN) **20041010050500013M02606**.

Provisional Step

We create an artificial IBAN composed of the country code (Table 2, page 22), followed by **'00'**. This gives us the number **FR0020041010050500013M02606**.

Step No.1

We move the first four characters 'FR00' to the end of the number, so we have **20041010050500013M02606FR00**.

Step No.2

We convert the letters to numbers using the conversion Table 1 (page 21), and we get **200410100505000132202606152700**.

Step No.3

We divide the first 9 digits of the number resulting from step 2 by 97 and calculate the remainder. **200410100 ÷ 97** gives a remainder of **49**.

Step No.4

We replace the digits **200410100** with the remainder **49** and we have the number **49505000132202606152700**.

Step No.5

We repeat Step No.3 on the first 9 digits of the number resulting from step 4. **495050001 ÷ 97** gives a remainder of **25**.

Step No.6

We replace the digits **495050001** with the remainder **25** and have the number **2532202606152700**.

Step No.7

We repeat Step No.3 on the first 9 digits of the number resulting from step 6. **253220260 ÷ 97** gives a remainder of **14**.

Step No.8

We replace the digits **253220260** with the remainder of **14** and we have the number **146152700**.

Step No.9

We finally repeat Step No.3 on the number resulting from step 8. **146152700 ÷ 97** gives a remainder of **84**.

Step No.10

The remainder in step 9 is deducted from 98. **98-84 = 14**.

“14” are the check digits of the French account 20041010050500013M02606. Consequently, the IBAN of the French Account is:

FR1420041010050500013M02606

12.4 Example of the validation of the check digits of a French IBAN

Assuming that we need to validate the check digits of the following French IBAN **FR 1420041010050500013M02606**.

The number will be given to us either in electronic format, which will be **FR1420041010050500013M02606** or in paper format which will be **FR14 2004 1010 0505 0001 3M02 606**.

In order to proceed with the validation of the check digits we take the following steps:-

Preliminary Step

If the IBAN is given to us in paper format we convert to electronic format by deleting all the empty spaces and any non-alphanumeric characters. The number will then appear as follows: **FR1420041010050500013M02606**.

Step No.1

We move the first four characters ‘**FR14**’ to the end of the number and have **20041010050500013M02606FR14**.

Step No.2

We convert the letters to numbers using the conversion table1, (page 21) and we have **200410100505000132202606152714**.

Step No.3

We divide the first 9 digits of the number in step 2 by 97 and calculate the remainder. **200410100÷97** gives a remainder of **49**.

Step No.4

We replace the digits **200410100** with the remainder **49** and have the number **4950500132202606152714**.

Step No.5

We repeat Step No.3 on the first 9 digits of the number resulting from step 4. **495050001 ÷ 97** gives a remainder of **25**.

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Step No.6

We replace the digits **495050001** with the remainder **25** and we have the number **2532202606152714**.

Step No.7

We repeat Step No.3 on the first 9 digits of the number resulting from step 6. **253220260 ÷ 97** gives a remainder of **14**.

Step No.8

We replace the digits **253220260** with the remainder **14** and have the number **146152714**.

Step No.9

We finally repeat Step No.3 on the 9-digit number resulting in step 8. **14615714 ÷ 97** gives a remainder of **1**.

Given that the final remainder is '1' the check digits '14' of the French IBAN are correct and consequently we accept the correctness of the number given to us.

TABLE 1

**Conversion
of Alphabetic Characters To Numbers**

A = 10	G = 16	M = 22	S = 28	Y = 34
B = 11	H = 17	N = 23	T = 29	Z = 35
C = 12	I = 18	O = 24	U = 30	
D = 13	J = 19	P = 25	V = 31	
E = 14	K = 20	Q = 26	W = 32	
F = 15	L = 21	R = 27	X = 33	

TABLE 2

Codes of European Countries as per ISO 3166

ENGLAND	GB	SPAIN	ES
AUSTRIA	AT	ITALY	IT
BELGIUM	BE	CYPRUS	CY
DENMARK	DK	LUXEMBOURG	LU
FRANCE	FR	NORWAY	NO
GERMANY	DE	HOLLAND	NL
SWITZERLAND	CH	PORTUGAL	PT
GREECE	GR	SWEDEN	SE
IRELAND	IE	FINLAND	FI