

Central Bank of Bahrain

ISO International Bank Account Number (IBAN) Standard for the Kingdom of Bahrain

Version 1: ISO IBAN Standard for the Kingdom of Bahrain

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1.0 Introduction

Implementation of International Bank Account Number (IBAN) is an initiative of the Bahrain Economic Vision 2030 to further strengthen Bahrain's status as the regional financial centre.

IBAN is the internationally accepted ISO (the International Organization for Standardization) 13616-1 standard^{1/} numbering system to identify Bank accounts.

The IBAN provides a unique account number for each customer account, which allows the sending and receiving Bank to validate the accuracy of the IBAN of the beneficiary. Accordingly, any Electronic Payment containing a validated IBAN could be credited faster to the beneficiary's account.

The main objective of adopting IBAN is to facilitate Straight through Processing (STP) of Electronic Payments by minimising delays as well as extra costs associated with incorrect account numbers.

The adoption of IBAN does not require changing the existing account numbers. Instead, the IBAN will represent the existing account numbers in a standardised format, which could be validated by Banks using one common ISO standard methodology.

The IBAN Committee, which comprises representatives of the Central Bank of Bahrain (CBB), Bahrain Association of Banks (BAB) and Banks, was formed in early 2010 to work out the structure of the IBAN for the Kingdom of Bahrain and its implementation plan. Having considered the ISO IBAN Standards and views of Banks, the IBAN Committee drafted the IBAN format for the Kingdom of Bahrain. The CBB, BAB and Banks are involved in the implementation of the IBAN Standard in the Kingdom of Bahrain.

The IBAN format and its structure are defined in the IBAN Standard ISO 13616-1:2007. The IBAN Standard ISO 13616-1:2007 can be obtained from the ISO website www.iso.org. SWIFT (Society for Worldwide Interbank Financial Telecommunication) acts as the registration authority for ISO 13616 compliant national IBAN formats. As at February, 2011, 52 countries were registered in the IBAN Registry available at <http://www.swift.com>.

^{1/} Financial services – International Bank Account Number (IBAN) ISO 13616-1:2007

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2.0 Scope of this IBAN Standard Document

This IBAN Standard document contains the:

- (a) Format, structure and length of the IBAN for the Kingdom of Bahrain;
- (b) Electronic and printed format of IBAN;
- (c) Scope, generation and usage of the IBAN;
- (d) Parties authorized to generate and issue IBAN; and
- (e) The methodology for generation and validation of the IBAN as well as at which points the validation must be carried out.

3.0 IBAN Specifications

The IBAN Standard provides an ISO 13616-1:2007 compliant IBAN format for customer account numbers in the Kingdom of Bahrain.

3.1 Definitions

In this IBAN Standard document, the following terms and definitions apply:

“Bank” shall mean all retail banks and any other payment service provider authorized by the CBB.

“Bank Identifier” shall mean the identifier that uniquely identifies the financial institution and, when appropriate, the branch of that financial institution servicing an account.^{1/} The Bank Identifier for the Kingdom of Bahrain is the first four letters of the SWIFT Code (BIC) which uniquely identifies the Bank (where the customer maintains the respective account).

“Basic Bank Account Number (BBAN)” shall mean the identifier that uniquely identifies an individual account at a specific financial institution in a particular country and which includes a Bank identifier of the financial institution servicing that account.^{1/} The BBAN of the Kingdom of Bahrain has two components: Bank Identifier of the Bank having that account and the Core Customer Account Number.

“Capture of IBAN” shall mean converting an IBAN in paper format to electronic format.

“Core Customer Account Number” shall mean the customer account number at a Bank, which is used to make and receive an Electronic Payment.

“Electronic Payment” shall mean an electronic fund transfer or an electronic payment to and from customer accounts which take place between Banks.

“Generation of IBAN” shall mean the one time process of creating an IBAN for a customer account.

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“**International Bank Account Number (IBAN)**” shall mean an expanded version of the Basic Bank Account Number (BBAN), intended for use internationally, which uniquely identifies an individual account at a specific financial institution, in a particular country.^{1_/_}

“**Straight through Processing (STP)**” is the procedure for transferring funds electronically without manual intervention.

“**Validation or Checking of IBAN**” shall mean the process of checking the check digits of an IBAN to ensure that it is a valid IBAN.

3.2 Length of IBAN

The IBAN for the Kingdom of Bahrain is fixed in length, 22 characters, to make it as short as possible and as long as necessary, to ensure convenience to customers and Banks.

3.3 Format and Structure of IBAN

The IBAN for the Kingdom of Bahrain comprises three (3) components:

- (i) **Country Code:** First 2 characters are fixed as BH, the ISO 3166-1 two letter Country Code^{2_/_} which identifies Bahrain, where the Bank servicing the customer account resides.
- (ii) **Check Digits:** The third and fourth characters are numeric and represent the check digits (2 digits in an IBAN that are generated by the Bank that issues the IBAN). The check digits are used to verify the accuracy of the IBAN. These check digits are generated using the scheme given in the ISO 13616-1:2007. This scheme is based on the scheme defined in ISO/IEC 7064 (MOD97-10)^{3_/_}. Details are given in the section 6.0 and in Annexure I. The scheme for calculating and validating the check digit of the IBAN is uniform across all countries using IBAN.

^{2_/_} ISO 3166-1, Codes for the representation of names of countries and their subdivisions-Part 1: Country Codes.

^{3_/_} ISO/IEC 7064:2003, Information technology - Security techniques - Check character systems

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(iii) **BBAN (Basic Bank Account Number):** The remaining part of the IBAN from the fifth character to the twenty second character is known as BBAN. It is the domestic part of the IBAN which uniquely identifies an account number of a customer at his/her respective Bank in Bahrain. The characteristics of the BBAN:

- It has a fixed length of 18 characters;
- It has a fixed position in the IBAN;
- BBAN consists of two parts: the Bank Identifier and the Core Customer Account Number; and
- BBAN characters contain numeric characters (0 to 9) and upper case letters (A to Z without special characters viz. separators and punctuations).

Bank Identifier: The first 4 letters of SWIFT Code (BIC) is the Bank Identifier that uniquely identifies the Bank (where the customer maintains the respective account). The characteristics of the Bank Identifier are as follows:

- It has a fixed position and length (4 letters) in the IBAN; and
- Alpha characters are upper case letters.

Core Customer Account Number: is an account number which identifies the customer's account at a Bank in the Kingdom of Bahrain. The following are the characteristics of the Core Customer Account Number:

- The length of the Core Account Number in the BBAN is fixed as 14 characters for the Kingdom of Bahrain and is right aligned. Accordingly, it may be necessary to pad leading zeros (at the beginning of the Core Account Number) to ensure the required fixed length. This standard does not specify a format for the contents of the Core Customer Account Number. Accordingly, each Bank can maintain its current Core Customer Account Numbers (which may comprise branch code, account number, account type, currency code, serial number and check digit etc); and
- The Core Customer Account Number may contain alphanumeric characters, but all alpha characters to be in upper case letters.

3.4 Presentation Format of IBAN

IBAN shall be represented in the following two formats:

(a) **Electronic Format**

The IBAN shall be presented in the form of a continuous string of characters in Electronic Payment messages.

Example: BH50NBOB00001299123456

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(b) Print format.

Since IBAN is relatively long (for example, printed in the Bank account statements) the IBAN shall be divided into groups of four characters and printed in paper documents for easy readability. Each group shall be separated by a blank space of one character. The last group of an IBAN of a Bank customer account in the Kingdom of Bahrain shall have a length of two characters.

Example: BH50 NBOB 0000 1299 1234 56

The format structure and content of IBAN is explained below, with examples:

Example 1: IBAN for a Core Customer Account Number with 10 characters (Numeric)				
IBAN electronic format example:		BH50NBOB00001299123456		
IBAN print format example:		BH50 NBOB 0000 1299 1234 56		
Header		BBAN (Basic Bank Account Number) NBOB 0000 1299 1234 56		
BH	50	NBOB	0000	1299 1234 56
Country Code (Alpha)	Check Digits (Numeric)	Bank Identifier (Alpha)	Additional zeros required to match the length of the Core Customer Account Number to the fixed length of 14 digits.	Core Customer Account Number (may include account type + branch code + customer A/C number) (Numeric)

Example 2: IBAN for a Core Customer Account Number with 14 characters (Alphanumeric)				
IBAN electronic format example:		BH89SCBLBHD18123456701		
IBAN print format example:		BH89 SCBL BHD1 8123 4567 01		
Header		BBAN (Basic Bank Account Number) SCBL BHD1 8123 4567 01		
BH	89	SCBL	BHD1 8123 4567 01	
Country Code (Alpha)	Check Digits (Numeric)	Bank Identifier (Alpha)	Core Customer Account Number (may include currency code + account type + customer A/C number + sequence no.) (Alphanumeric)	

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4.0 Scope and Usage

4.1 Scope

As directed by the CBB, the IBAN shall be used by Banks and their customers for Electronic Payments which take place between Banks. This includes:

- (a) Domestic Electronic Payments to and from customer accounts of Banks in the Kingdom of Bahrain;
- (b) Cross-border outgoing Electronic Payments from customer accounts of Banks in the Kingdom of Bahrain to customer accounts of banks/financial institutions in “Countries that have adopted IBAN” where the use of IBAN is mandatory; and
- (c) Cross-border incoming Electronic Payments to customer accounts of Banks in the Kingdom of Bahrain from customer accounts of banks/financial institutions in “Countries that have adopted IBAN” as well as “Countries that have not adopted IBAN”.

Customers may use IBAN in making cross-border, outgoing Electronic Payments from their Bank accounts in the Kingdom of Bahrain to customer accounts of banks/financial institutions in “Countries that have adopted IBAN” but the use of IBAN is not mandatory.

In this IBAN Standard ‘Countries that have adopted IBAN’ include:

- (a) Countries registered in the IBAN registry at SWIFT; and
- (b) Any other country (which adopted IBAN but not registered at SWIFT) specified by the CBB.

Banks and their customers may also use IBAN for paper based customer payments which take place between Banks.

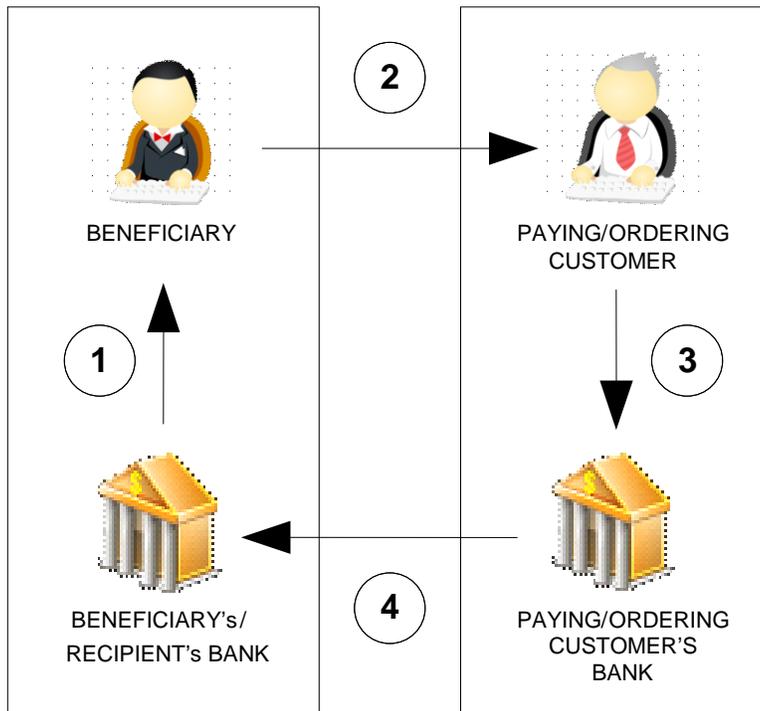
4.2 IBAN Usage

Banks shall use IBAN to identify a customer account which makes or receives an Electronic Payment through a Bank. Accordingly, any customer who makes or receives an electronic financial transaction, as specified in sub-section 4.1 above, needs to use IBAN. The role of Banks in using IBAN in the processing of an Electronic Payment involves recognition, capturing and validation of IBAN.

Banks shall request the customer initiating an Electronic Payment to a customer in another country, where the use of IBAN is mandatory, to provide the IBAN of the beneficiary.

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The procedure to be followed in using an IBAN is explained below:



1. The Bank holding the beneficiary's (recipient's) account generates and provides the IBAN to the beneficiary;
2. The beneficiary communicates the IBAN to the paying customer/ordering customer;
3. The paying/ordering customer submits an electronic fund transfer/payment order, which includes the beneficiary's IBAN; and
4. The paying/ordering customer's Bank validates the IBAN (using MOD 97-10 method developed according to the ISO/IEC 7064) in the outgoing payment message. After the receipt of the incoming payment message, the beneficiary's (recipient's) Bank validates the IBAN and credits the money to the beneficiary's account.

5.0 Generating and Issuing IBAN

5.1 Generation of IBAN

IBAN generation shall be done only by the Bank where customer maintains his/her account.

Banks shall use the scheme given in the ISO 13616-1:2007 [which is based on the scheme defined in ISO/IEC 7064 (MOD 97-10)] to generate the check digits of the IBAN of a customer account and ensure the accuracy of the check digits of the IBAN.

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5.2 Issuing and Awareness Creation on IBAN

Banks that maintain the customer account shall:

- (a) Provide the IBAN to each of their existing and new customers on the date as specified by the CBB;
- (b) Adopt adequate measures to communicate IBAN and create awareness on the proper usage of IBAN to their customers;
- (c) Indicate the IBAN of the customer and SWIFT Code (BIC) of the Bank in the header of the customer's Bank account statement(s), on the date specified by the CBB. Banks may use any other means to communicate the IBAN to their customers;
- (d) Advise their customers, well in advance, that it is mandatory to use IBAN in payment orders/messages relating to customer Electronic Payments, as specified in the section "Scope and Usage" above;
- (e) Advise their customers about the requirement to inform their IBANs to various parties from whom they receive and expect to receive payments, both, domestic and cross border; and
- (f) Advise their customers that an incorrect IBAN will result in either crediting the payment to a wrong account or the payment being delayed/rejected.

6.0 Check Digit Generation and Validation

Banks shall use the scheme given in the ISO 13616-1:2007 [which is based on the scheme defined in ISO/IEC 7064 (MOD 97-10)] to generate and validate the check digits of the IBAN of a customer and ensure the accuracy of the check digits.

It is mandatory for Banks to validate the check digit of:

- (a) Domestic Electronic Payments to and from customer accounts of Banks in the Kingdom of Bahrain;
- (b) Cross-border outgoing Electronic Payments from customer accounts of Banks in the Kingdom of Bahrain to customer accounts of Banks/financial institutions in "Countries that have adopted IBAN" where the use of IBAN is mandatory;
- (c) Outgoing Electronic Payments from Bank accounts in the Kingdom of Bahrain to customer accounts of banks/financial institutions in "Countries that have adopted IBAN" but the use of IBAN is not mandatory, if the IBAN of the beneficiary is provided; and
- (d) Cross-border incoming Electronic Payments to customer accounts of Banks in the Kingdom of Bahrain from customer accounts of banks/financial institutions in "Countries that have adopted IBAN" as well as "Countries that have not adopted IBAN".

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In the case where a Bank acts as a correspondent Bank and receives a payment against an account of another Bank in the Kingdom of Bahrain, prior to entering the outgoing payment, the respective Bank shall validate the IBAN.

Online tools to validate the structure of IBANs are provided by a number of organisations. One example is the UN/CEFACT TBG5 IBAN ‘validator’ of UN/CEFACT United Nations Centre for Trade Facilitation and Electronic Business, which can be accessed via <http://www.tb5-finance.org/?ibancheck.shtml>. Annexure I provides examples of how to generate a check digit and validate a check digit of an IBAN.

6.1 Check Digit Generation

Steps to be followed in generating check digits are summarised below:

- Move the country code and check digit (mark with ‘00’) to the right end of the BBAN.
- To calculate the check digit, temporarily convert the letters in the IBAN into numbers (numeric) using the “Alpha Characters to Digits Conversion” table given below.

Table 1: Alpha Characters to Digits Conversion

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

- Apply the check character system MOD 97-10 as per the ISO/IEC 7064. The final remainder should be subtracted from 98. If the result is a one digit number (less than 10) it is required to add a zero ‘0’ at the beginning to derive the check digit.

6.2 Check Digit Validation

A customer may provide the IBAN in either electronic format and/or paper format. If the customer has stated the beneficiary's IBAN in paper format, it is necessary to convert it to electronic format (by deleting all empty spaces and any non-alphanumeric characters).

Method of Validating the IBAN Check Digits is summarised below:

- Move the first 4 characters (country code and two check digits) to the end of the BBAN.
- Convert the letters to numbers using conversion table 1 above.
- Apply check character system MOD 97-10 as per the ISO/IEC 7064.
- If the remainder is '1', the check digits of the IBAN are considered valid.

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Annexure I: Examples of Generating and Validating IBAN Check Digits

(i) Check Digit Generation

Preparatory Step:

Assume that it is required to convert the Core Customer Account Number of **1299123456** at the National Bank of Bahrain (NBB) into an IBAN.

Create an artificial IBAN comprised of:

- **Bahrain Country Code** 'BH', as per ISO 3166 (positions 1 and 2);
- **Check digit** mark with '00' (positions 3 and 4);
- **Bank Identifier** of NBB is 'NBOB' (positions 5 to 8);and
- **Core Customer Account Number**. Since the length of the Core Customer Account Number (1299123456) is less than 14 characters, '0000' should be added at the beginning to make it 14 characters long (position 9 to 22)

Result: BH00NBOB00001299123456.

Step 1:

Move the first four characters '**BH00**' to the right end of the number as follows:

Result: NBOB00001299123456BH00.

Step 2:

Convert the letters 'NBOB' to numbers (numeric) using the conversion Table 1 above:

Result: 2311241100001299123456111700

Step 3:

Apply MOD 97-10 algorithm (as per the ISO/IEC 7064).

If the number is too long, then the calculation can be split into consecutive remainder calculations: on integers with a maximum length of 9 digits.

Accordingly, it is required to divide the first **9** digits of the number by **97** and calculate the remainder. In this example (**231124110/97**) the remainder is 76.

Step 4:

Replace the digits **231124110** with the remainder 76:

For example: **760001299123456111700.**

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Step 5:

Repeat step No. 3 with the first 9 digits of the number arrived at step 4 above:

Result: 760001299/ 97 gives a remainder of **91**.

Step 6:

Replace the digits **760001299** with the remainder 91 as follows:

Result: 91123456111700

Step 7:

Repeat step No. 3 again:

Result: 911234561/ 97 gives a remainder of **71**.

Step 8:

Replace the digits **911234561** by the remainder **71**:

Result: 7111700.

Step 9:

Repeat step No. 3 on the last remaining 7 digits. i.e $7111700/97$ gives a remainder of **48**.

Step 10:

Subtract this final remainder (48) from 98. ($98-48=50$)

These digits provide the required Check Digits of the BBAN:

NBOB00001299123456. Accordingly, the IBAN of this account number is
BH50NBOB00001299123456.

(ii) Check Digit Validation

Online tools to validate the structure of IBANs are provided by a number of organisations. One example is the UN/CEFACT TBG5 IBAN 'validator' which can be accessed via <http://www.tb5-finance.org/?ibancheck.shtml>

Method of Validating the IBAN Check Digits:

Preparatory Step:

Assume that it is required to validate the Check Digits of the following IBAN:

BH50NBOB00001299123456.

Customer may provide this number either in electronic IBAN format:

BH50NBOB00001299123456.

Customer may provide this number either in paper IBAN format:

BH50 NBOB 0000 1299 1234 56.

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If the customer has stated the beneficiary's IBAN in a paper format, it is necessary to convert it to electronic format (by deleting all empty spaces) to verify the Check Digits of the above-mentioned IBAN:

Result: BH50NBOB00001299123456.

Step 1:

Move the first 4 digits 'BH50' to the right end of the number:

Result: NBOB00001299123456BH50

Step 2:

Convert the letters to numbers using the conversion table 1 above:

Result: 2311241100001299123456111750

Step 3:

Divide the first 9 digits of this number by 97 and calculate the remainder:

Result: 231124110/ 97 gives a remainder of 76.

Step 4:

Replace the digits 231124110 by the remainder 76:

Result: 760001299123456111750

Step 5:

Repeat step No. 3 on the number that resulted from step 4:

Result: 760001299/ 97 gives a remainder of 91.

Step 6:

Replace the digits 760001299 by the remainder 91:

Result: 91123456111750.

Step 7:

Repeat step No. 3 on this number:

Result: 911234561/ 97 gives a remainder of 71.

Step 8:

Replace the digits 911234561 by the remainder 71:

Result: 7111750.

Step 9:

Repeat step No. 3 on the remaining 7 digits:

Result: 7111750 divided by 97 gives a remainder of 1.

Since the remainder is '1', the Check Digits of '50' of the IBAN are considered as valid.