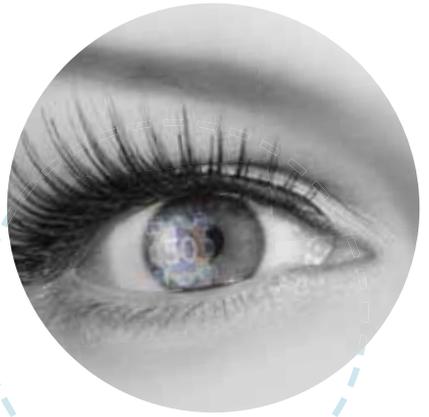


Chapter **6**



The paper fortress

Knowing and recognising the euro notes

By now, we are all able to identify the different euro banknotes.

But do we know all the security features which protect them ?

These few pages explain them in detail, to help you to recognise your banknotes and be sure they are genuine. We also draw attention to the themes depicted on the notes, reflecting European history and culture.

The euro notes are identical in all the countries of the euro area. There are seven denominations : five, ten, twenty, fifty, one hundred, two hundred and five hundred euros. Until 2001, the National Bank printed the quantity necessary for Belgian circulation plus a reserve stock.

Since 2002, it mainly prints the 50 euro notes.

It is also the National Bank that puts the notes and coins into circulation.



This chapter looks at the various security features incorporated in euro notes. Production of these notes calls for the very latest printing techniques to discourage forgery.

The last series of Belgian franc banknotes was already at the cutting edge of technology, so we still find a number of characteristics in euro banknotes with which we were already familiar. But they also present some interesting innovations ; the euros combine very precisely the most advanced security features offered by the last national European banknotes.

Feel the banknote, look at it and hold it at an angle : this will enable you to be sure that it is genuine.

All that is needed is a little observation!

1. The hologram rainbow



All the notes have a holographic element on the front.

For the three smallest denominations (5, 10 and 20 euros), this is a vertical stripe. Tilting the note, you will see in succession the euro symbol, the face value of the note, which appears to change in size, and stars, all in the colours of the rainbow.

For the four largest denominations (50, 100, 200 and 500 euros), this feature takes the form of a hologram foil patch at the bottom right of the "window" or "doorway" side (the front), where we see in succession the euro symbol, the face value of the denomination, which appears to change in size, and the main motif.

In all cases, if we examine the hologram by holding the note up to the light, we can see various motifs depicted by dotted lines.

2. Coloured paper



The euro banknotes take full advantage of light and colour effects.

Each denomination naturally has a dominant colour in the printed motifs; but the paper itself is of the same dominant colour: grey (5 euros), red (10 euros), blue (20 euros), orange (50 euros), green (100 euros), yellow (200 euros) and violet (500 euros).

3. Notes that constantly change



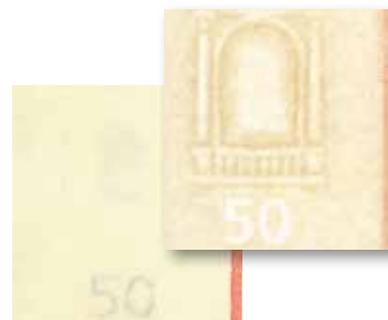
The last Belgian franc series familiarised us with optically varying inks that shimmered and changed colour according to the angle from which they were viewed. These features appeared on denominations of BEF 500 or more. On the 50 euro notes and larger denominations, in the figure on the reverse indicating the face value, we can recognise the optically variable ink of our old BEF 2 000 note, which changes from violet to olive green.



The "iridescence", on the other hand, is new to us. On the three smallest denominations (5, 10 and 20 euros), you will see, on the bridge side (reverse), when you tilt the note slightly in the light, a pearly strip showing alternately the face value of the note and the euro symbol. This is pre-printed on the paper.

4. Transparency effects

As on the Belgian franc notes, the watermark can be seen when the note is held up to the light. It reproduces the main motif of the window or doorway side (front) with the addition of the face value in very strong contrast. To identify a watermark properly, you need to place it first on an opaque surface (the thickest areas show up white while the others are darker) and then hold it up to the light (opposite effect).



It is also worthwhile examining the hologram strip or patch by holding the notes up to the light: this reveals motifs appearing in dotted outline; they depict the euro symbol and other microtexts.



The security thread in the euro notes never shows on the surface: it is entirely embedded in the paper and therefore appears as a dark line only when held up to the light. You can then see that it is micro-perforated with the value of the note and the word "EURO".



If we hold the note up to the light, the "see-through" effect (or "front-reverse motif") reveals the whole figure indicating the face value of the note, which is incomplete in the top left-hand corner of the front and top right-hand corner of the reverse.



5. Under the magnifying glass and in ultraviolet light

Under ultraviolet light, our euro notes really sparkle. Unlike ordinary paper, the banknote paper remains dark. This background makes the blue, green and red microfibres stand out even more clearly. On the front, the European Union flag and the signature of the President of the ECB appear in fluorescent green, and the stars in red/orange. On the reverse, the bridge, the map of Europe and the face value show up in yellow.



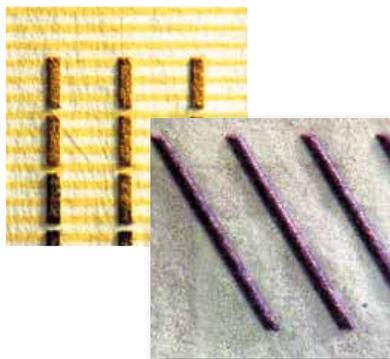
By using a magnifying glass instead of ultraviolet light, you can also examine the two sides of the note and find the mini-text and micro-text indicating the face value of the note, in Arabic numerals and in the Latin and Greek alphabets.



6. And to the touch?



The paper used for the euro notes has the characteristic feel of the banknote paper that we were used to with Belgian francs. As in the last series, various elements printed in relief can be felt. You will find them on the window or doorway (front) side in the series of initials of the ECB in the five linguistic variants (at the top, to the right of the copyright symbol ©). This effect, brought out by intaglio printing (copperplate engraving), is also produced in the same way for the windows or doorways and the banknote's face value on the same side.

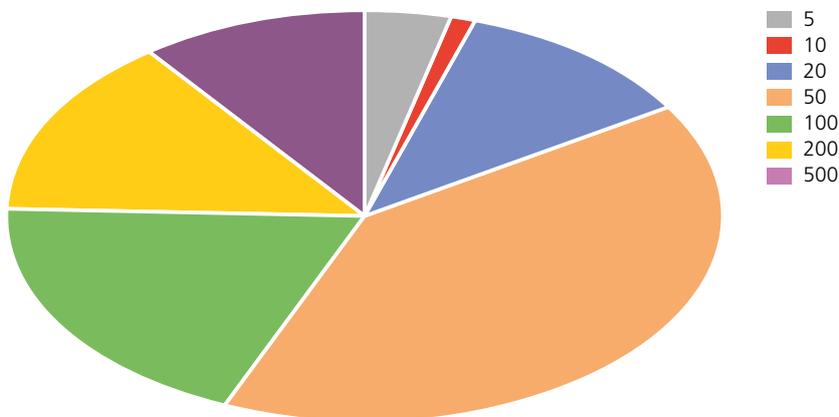


This tactile authentication is obviously useful for blind and partially sighted persons. Both the length and the width of the smallest denominations (5, 10, 20 and 50 euros) are graduated. The three largest denominations (100, 200 and 500 euros) are identical in width but still increase in length. The largest two denominations have lines printed in relief on the front. They are vertical and situated close to the bottom edge on the 200 euro note, and oblique and situated along the right-hand edge on the 500 euro note.

The euro notes in a few figures

For the launch of the euro on 1 January 2002, twelve printing works located throughout the euro area – except in Luxembourg – printed 15 billion euro notes, of which 6.6 billion were put into circulation. The various countries' needs ranged from 46 million notes (Luxembourg) to 4.32 billion (Germany). Belgium needed 560 million. Mid 2011, the number of notes in circulation reached 15 billion with a total value of approximately 850 billion euro.

The share of the various denominations in the total was as follows (number of notes):
 € 5: 4 %, € 10: 1 %, € 20: 11 %, € 50: 40 %, € 100: 19 %, € 200: 14 %, € 500: 10 %.

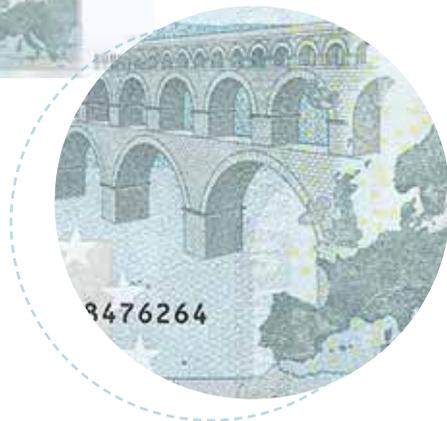


Journey through European architecture

The euro notes do not only have a financial value. By depicting our most famous compatriots, the post-war series of Belgian franc notes aimed to illustrate the glory of our country's history and culture. With the advent of the euro, portraits no longer appear on our banknotes (for the time being?). However, the banknote designs are still meant to convey certain ideas, albeit in a more symbolic manner.

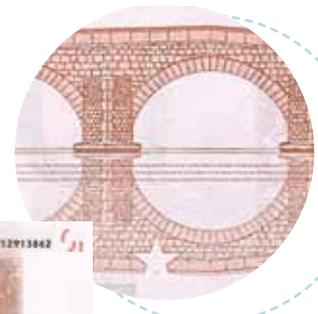
Focusing on European architectural eras and styles, the euro banknote series seeks to convey a message of openness and cooperation via the images of windows and doorways on the front. The bridges on the reverse are a variation on the theme of communication between nations in Europe and beyond. Each denomination also has on it a map of Europe and several representations of the 12 stars of the European Union flag.

Let us look for a moment at the styles chosen and the monuments which illustrate them. These are all imaginary monuments, but sometimes they resemble well-known buildings that can be found here and there around Europe.



The 5 euro note evokes classical, Greco-Roman architecture: a window with a full arch (semicircle) on the front and an aqueduct on the back will bring back some memories for those familiar with the Pont du Gard (France, 1st century B.C.).

With the 10 euro note, we take a leap forward in time of around ten centuries. The window is typical of the fully developed Romanesque style (11th-12th century) which spread with the monastic movement and is to be found all over Europe. On the back, there is a bridge reminiscent of that of Puente la Reina (Spain, 11th century), on the route of the pilgrimage to Santiago de Compostela.



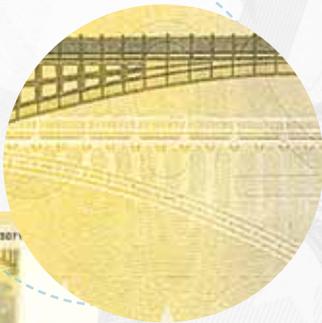
The 20 euro denomination is devoted to Gothic art. The large broken-arch window, with its tracery (a stone lattice running along the inside of the window) and its floral motifs is characteristic of the High Gothic period (13th century). Just think of the cathedrals of Reims or Paris. And Brussels too, of course. The full arch of the bridge is also replaced by the broken arch.



A further leap of a few centuries with the 50 euro note takes us into the Renaissance (from the 15th to 16th century). Italy rediscovers its classical past, the Gothic style is avoided. There is a return to the classic columns and the triangular pediments of ancient times. Sometimes "flowery", the Renaissance also occasionally favours a certain austerity, which is to be found in the design of the bridge. As it spreads, Renaissance architecture will display many regional variants, primarily in Southern Europe.



The Baroque style (17th century) which decorates the 100 euro note takes over many elements from the Renaissance, but the ornamentation is more elaborate. Architecture often acquires a theatrical dimension, as is evidenced by the masculine figures ("Atlantes") which serve as columns on either side of the doorway. The bridge itself is ornamented with statues: think of the Ponte Sant Angelo in Rome or the Charles Bridge in Prague.



In the 19th century, with the industrial revolution, the first examples of prefabricated architecture, using iron and glass, appeared; these are illustrated on the 200 euro note. For the Belgians, the front might be reminiscent of the Royal Greenhouses at Laeken. The bridge featuring on the back is also characteristic of this era. The Cockerill factories produced and erected many bridges of this type. But the most representative engineer in this style is undoubtedly the Frenchman Gustave Eiffel, whose railway viaduct at Garabit is quite famous.



Modernist architecture, which came into its own in the mid-20th century, gradually opposed and then banished all decoration. Rectangular forms and glass partition walls became characteristic of an unprecedented world-wide architecture. On the back of the 500 euro note devoted to this period, suspension bridges display silhouettes which are familiar to some people: between Huy and the Dutch frontier, there are three of these strong and yet ethereal structures crossing the Meuse...

One coin, two faces: Belgian !

In the spring of 1996, following the informal meeting of the ECOFIN Council in Verona, the European Commission was instructed to set up a competition to choose the design for the common face of the coins.

The choice of the national face was left to the discretion of the Member States.

It was a Belgian, Luc Luycx, who won this international competition to design the common European face. The "national" face was designed by his countryman, Jan Alfons Keustermans, so that one could say that our euro coins are 100 % Belgian in their design !



Luc Luycx, designer of the common European face for the euro coins

The European face

Three themes were suggested to the artists

- European architectural and ornamental styles
- European Union aims and ideas
- famous Europeans

Minting coins is a highly specific field that requires artists to take into account a series of technical constraints and specifications so as to guarantee appropriate minting quality. For example, they have to avoid reliefs that are too asymmetrical, sharp differences in level or engravings too close to the edge. The dimensions of the coins are fixed, as is the width of the rim.

The series of coins designed by Luc Luycx for euros and eurocents is clear and easy for everyone to understand, and defines the euro as the currency of Europe and the Europeans. The coins present the European Union in various forms against a backdrop of stars, the symbols of Europe.

The 1, 2 and 5 eurocent coins suggest Europe's position in the world. The 10, 20 and 50 cent coins present the European Union as a group of nations. And finally, the 1 and 2 euro coins show a Europe without frontiers.



Robert Kalina, layout designer for the euro banknotes

For more information

- **The use of euro banknotes**, Monthly Bulletin, ECB, April 2011
- **How the euro became our money**, ECB, 2007
- Internet : www.ecb.int/euro/intro/html/index.en.html
www.ecb.int/stats/euro/circulationhtml/index.en.html
www.ecb.int/euro/banknotes/security/html/index.en.html
www.ecb.int/euro/play/run/html/index.en.html
www.ecb.int/euro/play/where_from/html/index.en.html
www.ecb.int/euro/play/find_features/html/index.en.html