



One currency for one Europe

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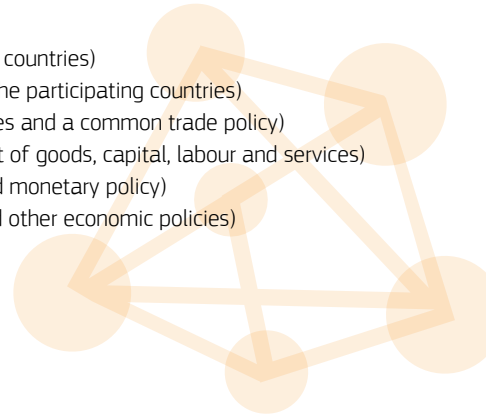


What is economic and monetary union?

Generally, economic and monetary union (EMU) is part of the process of economic integration. Independent states can integrate their economies to varying degrees in order to achieve the benefits of size, such as greater internal efficiency and more robustness to external events. The degrees of economic integration can be divided into six steps.

Steps of economic integration

1. A preferential trading area (with reduced customs tariffs between certain countries)
2. A free trade area (with no internal tariffs on some or all goods between the participating countries)
3. A customs union (with the same external customs tariffs for third countries and a common trade policy)
4. A common market (with common product regulations and free movement of goods, capital, labour and services)
5. Economic and monetary union (a single market with a single currency and monetary policy)
6. Complete economic integration (all the above, plus harmonised fiscal and other economic policies)

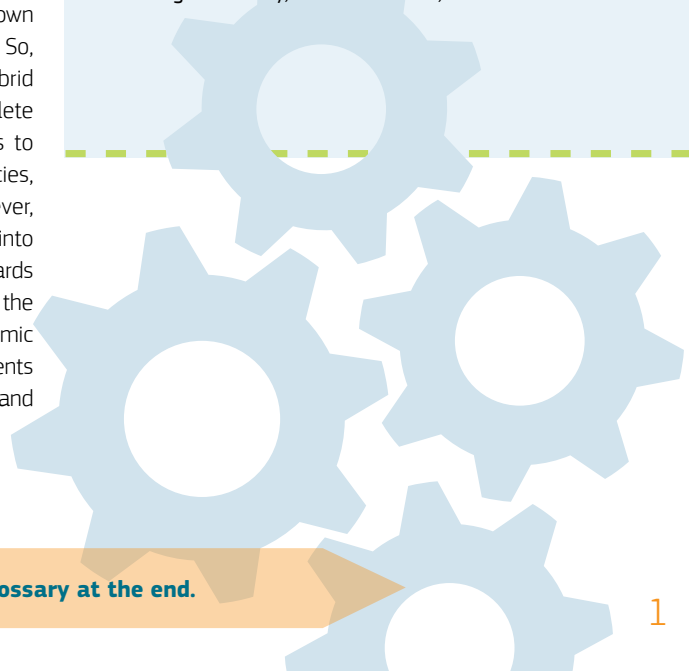


Economic integration and EMU in Europe

The degree of economic integration in the European Union varies. All EU countries are part of what we call EMU and form a common market, known as the **single market**. They all coordinate their economic policymaking to support the aims of EMU. When meeting economic convergence criteria, adopting the euro as the single currency is an obligation laid down in the EU treaties. Several EU countries are already more integrated and therefore have adopted the euro. These countries form the euro area and, as well as the single currency, have a single **monetary policy** conducted by the **European Central Bank (ECB)**. Those EU countries which are not part of the euro area retain their own currencies and conduct their own monetary policies. So, the degree of economic integration within EMU is a hybrid of steps 4 and 5 in the list above. To reach complete economic integration would require all EU countries to join the euro area and harmonise their fiscal policies, including taxation, and other economic policies. However, new **EU economic governance rules** came into force on 13 December 2011. As a major step towards closer economic integration, these rules strengthen the surveillance and coordination of fiscal and economic policies for all EU countries. Additional agreements between a large number of EU countries underpin and complement this.

Building on the past

Economic integration between independent states is not new. The Latin monetary union, comprising Belgium, Greece, France, Italy and Switzerland, existed from 1865 until 1927. The Scandinavian monetary union of Denmark, Sweden and Norway lasted from 1873 until 1924. The German Zollverein is perhaps one of the most successful examples, beginning with a customs union between German principalities in 1834 and producing a central bank, the Reichsbank, and a single currency, the Reichsmark, in 1875.



1957 > 1999

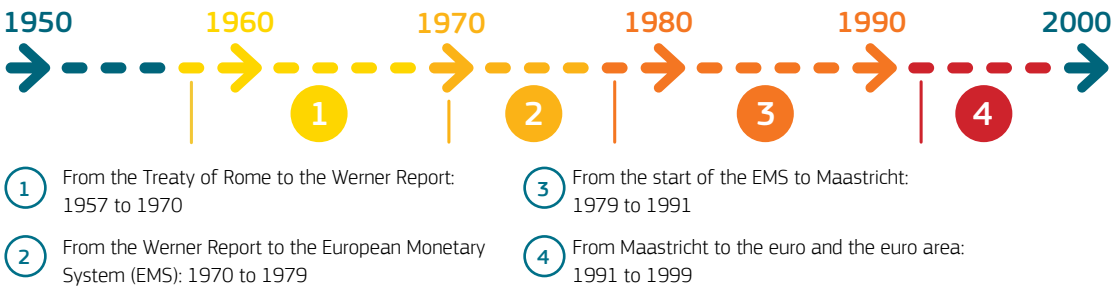
The path to economic and monetary union

EMU was a recurring ambition of the European Union from the late 1960s because it promised currency stability and an environment for higher growth and employment. However, a variety of political and economic obstacles barred the way until the signing of the **Maastricht Treaty** (Treaty on European Union or EU Treaty) in 1992. At various times, weak political commitment, divisions over economic priorities, lack of economic convergence and developments in international currency markets

outside the Union's control all played their part in frustrating progress towards EMU.

Nevertheless, the second half of the 20th century saw a constant search by EU countries for deeper economic cooperation as a means of strengthening the political bonds between them and protecting the common market.

The passage towards today's economic and monetary union can be divided into four phases



1957 to 1970

From the Treaty of Rome to the Werner Report

Treaty of Rome has little to say about money

The post-war order for the market economies of Europe, North America and Japan was founded on the **Bretton Woods System** which provided the international framework for currency stability with gold and the US dollar as the predominant monetary standard. The authors of the **Treaty of Rome** therefore assumed that stable currencies would remain the norm, and that Europe's construction could be securely based on achieving a customs union and a common market allowing the free movement of goods, services, people and capital.

Currency turmoil strikes in the late 1960s

The Bretton Woods system had already begun to show signs of strain in the late 1950s, and by 1968–69 a new era of currency instability threatened when market turbulence forced a revaluation of the Deutschmark and the devaluation of the French franc. This endangered the common price system of the common agricultural policy — which was, at that time, the main achievement of the European Community.

Signing of the Treaty of Rome (25 March 1957)



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Pierre Werner

The Community seeks economic prosperity and political development in EMU

Against this troubling background, and with the customs union largely achieved, the Community was anxious to set itself new goals for political development during the next decade. The 1969 Barre Report, which proposed greater economic coordination, brought new impetus and EMU became a formal goal at a summit in The Hague in 1969. Europe's leaders set up a high-level group under the then Luxembourg Prime Minister, Pierre Werner, to report on how EMU could be achieved by 1980.

The Werner Report — EMU in three stages

The Werner group submitted its final report in October 1970, setting out a three-stage process to achieve EMU within a 10-year period. The final objective would be irrevocably convertible currencies, free movement of capital and the permanent locking of exchange rates — or possibly a single currency. To achieve this, the report called for closer economic policy coordination with interest rates and management of reserves decided at Community level, as well as agreed frameworks for national budgetary policies.

1970 to 1979

From the Werner Report to the European monetary system

While EU countries were divided over some of the report's main recommendations, in March 1971 they agreed in principle on a three-stage approach to EMU. The first stage, narrowing of exchange-rate fluctuations, was to be tried on an experimental basis without any commitment to the other stages.

Unfortunately, the Werner strategy took fixed exchange rates against the dollar for granted. When the US effectively floated the dollar from August 1971, the fresh wave of market instability put upward pressure on the Deutschmark and squashed hopes of tying the Community's currencies more closely together.

Snake in the tunnel

To retrieve the situation, in March 1972, the EU countries created the **'snake in the tunnel'** as a mechanism for managing fluctuations of their currencies (the snake) inside narrow limits against the dollar (the tunnel). Hit by oil crises, policy divergence and dollar weakness, within 2 years the snake had lost many of its component parts and was little more than a Deutschmark zone comprising Denmark, Germany and the Benelux countries.



The 'quick death' of the snake did not diminish interest in trying to create an area of currency stability. A new proposal for EMU was put forward in 1977 by the then President of the European Commission, Roy Jenkins. It was taken up in a more limited form and launched as the **European monetary system (EMS)** in March 1979 with the participation of all EU countries' currencies, except the pound sterling.



Roy Jenkins
President of the European
Commission from 1977
to 1981

1979 to 1991 From the start of EMS to Maastricht

Controlling inflation becomes EC priority

The EMS was built on the concept of stable but adjustable exchange rates defined in relation to the newly created European currency unit — a basket currency based on a weighted average of EMS currencies. Within the EMS, currency fluctuations were controlled through the **exchange rate mechanism (ERM)** and kept within $\pm 2.25\%$ of the central rates, with the exception of the lira, which was allowed to fluctuate by $\pm 6\%$.

While the EMS's primary purpose was to reduce exchange-rate instability which was seen as damaging to trade, investment and economic growth, its creation was undoubtedly helped by a new consensus among EU countries that controlling and reducing inflation had to become an economic priority. The EMS was a radical new departure because exchange rates could only be changed by mutual agreement of participating EU countries and the Commission — an unprecedented transfer of monetary autonomy.

EMS — a decade of success

In the first few years, there were many realignments in the EMS. But by the time of the negotiations on the Maastricht Treaty in 1990-91, the EMS had proved a success. Short-term volatility of exchange rates between EC currencies was substantially reduced, thanks to a mixture of converging inflation rates, interest-rate management which targeted the exchange rate, joint intervention in the foreign exchange market and capital controls.

This success formed an encouraging backdrop to the discussions on EMU, together with the valuable experience in the joint management of exchange rates gained by the Community's central banks.



2.25%

The single currency would complete the single market

The case for EMU revolved around the need to complete the single market, the programme adopted in 1985 for removing all remaining barriers to the free movement of goods, services, people and capital. It was clear that the full benefits of the internal market would be difficult to achieve with the relatively high business costs created by the existence of several currencies and unstable exchange rates.

In addition, many economists and central bankers took the view that national monetary autonomy was inconsistent with the Community's objectives of free trade, free capital movements and fixed exchange rates. For many, this view was later confirmed by the turmoil which hit the ERM in 1992-93, causing the withdrawal of the lira and the pound sterling, and the widening of the fluctuation bands to 15%.



Jacques Delors
*President of the European Commission
 from 1985 to 1995*

The Delors Report recommended EMU in three stages

In June 1988, the **European Council** meeting at Hanover set up the Committee for the Study of Economic and Monetary Union, chaired by the then President of the Commission, Jacques Delors, and including all EC central bank governors. Their unanimous report, submitted in April 1989, defined the monetary union objective as a complete liberalisation of capital movements, full integration of financial markets, irreversible convertibility of currencies, irrevocable fixing of exchange rates and the possible replacement of national currencies with a single currency.

The report indicated that this could be achieved in three stages, moving from closer economic and monetary coordination to a single currency with an independent European Central Bank (ECB) and rules to govern the size and financing of national budget deficits.



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The three stages towards EMU

1990 ↓ — Stage 1
 (1990–1994)

Complete the internal market and remove restrictions on further financial integration.

— Stage 2
 (1994–1999)

Establish the European Monetary Institute to strengthen **central bank** cooperation and prepare for the **European System of Central Banks (ESCB)**. Plan the transition to the euro. Define the future governance of the euro area. Achieve economic convergence between EU countries.

2000 ↓ — Stage 3
 (1999 onwards)

Fix final exchange rates and transition to the euro. The ECB and ESCB are responsible for independent monetary policymaking. Implement binding budgetary rules in the EU countries.

Towards political, economic and monetary union: the Maastricht Treaty



And so to Maastricht

On the basis of the Delors Report, the Madrid European Council of June 1989 decided to proceed to the first stage of EMU in July 1990, and the 1989 Strasbourg European Council called for an intergovernmental conference to determine the Treaty revisions that would be needed to move to the second and third stages and implement EMU.

The first stage of EMU involved completing the internal market, starting with the coordination of economic policies and removing obstacles to financial integration. For the following stages, substantial preparatory work by central bank governors greatly eased the work of revising the Treaty.

The Treaty on European Union was approved by the Heads of State or Government at the European Council at Maastricht in December 1991 where it was decided that Europe would have a strong and stable single currency by the end of the century.

For economic and monetary union to provide a framework for more jobs and growth and to avoid disruption, it was necessary for the Member State economies to have achieved a high degree of convergence before introducing the single currency. Therefore, the Treaty on European Union set the 'Maastricht convergence criteria' that EU countries would have to meet in order to adopt the euro. These are shown in Table 1. In addition to these, EU countries would have to achieve convergence of the national laws and rules governing their national central banks and monetary issues.

Table 1. The Maastricht convergence criteria

What is measured	How it is measured	Convergence criteria
Price stability	Harmonised consumer price inflation rate	Not more than 1.5 percentage points above the rate of the three best performing EU countries
Sound public finances	Government deficit as % of GDP	Reference value: Not more than 3 %
Sustainable public finances	Government debt as % of GDP	Reference value: Not more than 60 %
Durability of convergence	Long-term interest rate	Not more than 2 percentage points above the rate of the three best performing EU countries in terms of price stability
Exchange rate stability	Deviation from a central rate	Participation in ERM for 2 years without severe tensions

The Maastricht convergence criteria were designed to ensure that an EU country's economy was sufficiently prepared for the adoption of the single currency. They provided a common baseline for the stability, soundness and sustainability of public finances for euro-area candidates that reflected economic policy convergence

and a resilience to economic shocks. The exchange-rate criterion was intended to show that an EU country could manage its economy without recourse to currency depreciation.

1991 to 1999

From Maastricht to the euro and the euro area

With agreement on the goal (EMU) and the conditions (the Maastricht criteria), the European Union could now move forward. Stage two of EMU began in July 1994 and lasted until the introduction of the single currency in 1999. Within stage two, a wide variety of preparatory activities were initiated.



1994 →

The European Monetary Institute (EMI) was established in Frankfurt in 1994. The forerunner of the ECB, the EMI began to coordinate monetary policy among the national central banks, which the Maastricht Treaty required to be independent, as well as working on the details of the single currency.

1995 →

The 1995 Madrid European Council agreed on the name for the new currency — the euro — and set out the scenario for the transition to the single currency that would start on 1 January 1999.

Between 1994 and 1998, EU countries made significant progress in economic policy convergence and took steps to align their budgetary positions with the Maastricht criteria.

1996 →

In 1996, the EMI presented the winning designs for the euro banknotes. The coins followed shortly afterwards, all coins bearing a common European side, chosen by the public and confirmed by the 1997 Amsterdam Council and a national side, the designs for which were chosen by each participating Member State individually.

1997 →

The 1997 Amsterdam European Council agreed the rules and responsibilities of the Stability and Growth Pact (SGP) that aims to ensure budgetary discipline under EMU. The European Commission was given the key responsibility of monitoring adherence to the SGP.

1998 →

In May 1998, 11 EU countries met the convergence criteria and thus formed the first wave of entrants who would go on to adopt the euro as their single currency. Denmark and the United Kingdom had 'opted out' from participating in the third stage of EMU, while Greece and Sweden did not fulfil all the criteria. The ECB and the European System of Central Banks (ESCB) were established in 1998, replacing the EMI, and on 1 January 1999 the third stage of EMU began.



1999 > 2002

The euro is launched

On 31 December 1998, the conversion rates between the euro and the currencies of the participating EU countries were irrevocably fixed. On 1 January 1999, the euro was introduced and the **Eurosystem**, composed of the ECB and the national central banks (NCBs) of the euro area countries, took over responsibility for monetary policy in the new euro area. This was the beginning of a transitional period that was to last 3 years and end with the introduction of euro banknotes and coins and the withdrawal of national banknotes and coins. In 2000, the **Council** decided, on the basis of a proposal by the Commission and after consultation of the **European Parliament**, that Greece fulfilled the necessary conditions for the adoption of the single currency, and the country joined the euro area on 1 January 2001.

While the euro replaced national currencies immediately, with the national currency units becoming sub-units of the euro, it initially existed only as scriptural or 'book' money. National currency banknotes and coins remained the means of everyday cash transactions. During the transitional period, it was the world of business and finance that began to use the euro in their everyday cashless operations. For the financial markets, this transition happened immediately — the ground was well prepared and trading in financial markets was exclusively in euros. For administrations and business, there was a longer transition period as they gradually switched their systems for accounting, pricing and payments over to

the euro. For citizens, the most visible part of the transition was the appearance of dual pricing on labels in shops and petrol stations, etc. This was part of an extensive publicity campaign to familiarise the general public with the euro and the coming introduction of banknotes and coins.

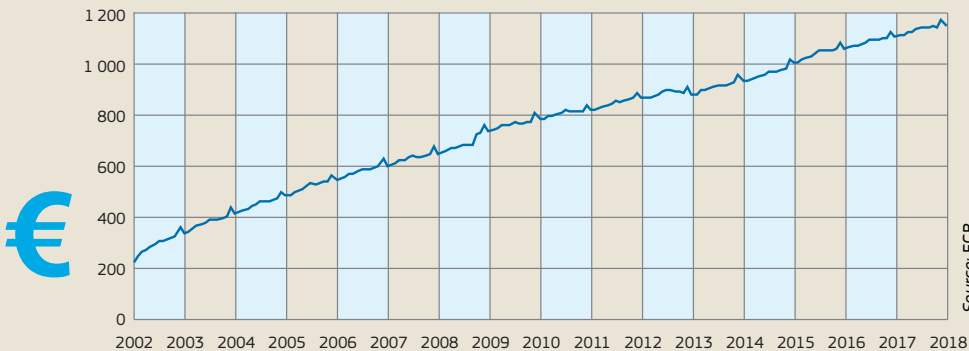
A new year and a new currency

On 1 January 2002, the greatest cash changeover in history took place. It was a challenge of unprecedented dimensions that involved the banking sector, cash-in-transit companies, retailers, the cash-operated machine industry, and the general public. Around EUR 144 billion in cash was provided early by the national central banks to banks (frontloading) and by these banks to retailers (sub-frontloading) to avoid bottlenecks in the supply chain. This meant that euro cash was widely available in all sectors in the first days of 2002. By 3 January 2002, 96 % of all automated teller machines (ATMs) in the euro area were dispensing euro banknotes. And already one week after the introduction, more than half of all cash transactions were being conducted in euros.

Rates posted in euros at an automatic distributor



Total value of euro banknotes in circulation between January 2002 and January 2018 (billion EUR)



The cash changeover was completed within 2 months. National banknotes and coins ceased to be legal tender by the end of February 2002 at the latest, and earlier in some euro area countries. By that time, more than 6 billion banknotes and close to 30 billion national coins had been withdrawn, and for over 300 million citizens in 12 EU countries the euro had finally arrived.

The euro today

Managing economic and monetary union

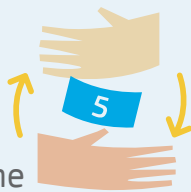
Like the single market, EMU is not an end in itself. It is an instrument to further the objectives of the European Union — in particular, balanced and sustainable economic growth and high employment. The operations and institutions of EMU were designed from the outset to support these objectives through the management of the monetary and economic aspects of the euro area.

Drawing lessons from shortcomings which became apparent in the course of the economic and financial crisis, the EU has strengthened EMU with stricter rules, an additional mechanism to monitor macroeconomic imbalances, as well as an assessment of draft budgets of euro-area countries. Additional agreements between a large number of EU countries underpin and complement this.

Monetary policy

The euro area has one currency with one monetary policy and independent, centralised decision-making.

The ECB and the central banks of all EU countries form the European System of Central Banks (ESCB). Within the ESCB, the ECB and the central banks of the euro-area countries form the Eurosystem. Decisions on monetary policy in the euro area can only be taken by the Governing Council of the ECB, which comprises the governors of the national central banks of those EU countries that have adopted the euro and the members of the Executive Board of the ECB. The Governing Council of the ECB is its supreme decision-making body.



The ESCB and the Eurosystem

The primary objective of the ECB is to maintain price stability within the euro area over the medium term as this provides the best framework for economic growth and employment. Price stability is notably maintained by the ESCB controlling interest rates and influencing economic developments.

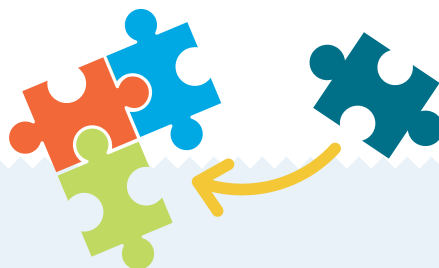
Status as of 1 January 2018



Economic policy

The responsibility for euro area economic policy remains largely with the EU countries, although the EU treaties and strengthened EU economic governance rules require them to coordinate their economic policymaking with a view to achieving the objectives of the EU. This coordination is ensured through the Commission and the **Ecofin** Council, which comprises the ministers for economy and finance of the EU countries. There are a number of structures and

instruments that help coordination. On most economic policy issues, the European Parliament co-legislates with the Council and thus actively contributes to the formulation of EU rules.



The Eurogroup

This is an informal grouping of the ministers of economy and finance of those EU countries that are in the euro area, which elects its own president who serves a term of two and a half years. The Commission and the ECB also take part in **Eurogroup** meetings. The Eurogroup is a forum for discussing euro-area related issues and policy coordination.

done to strengthen economic resilience and convergence in the EU and to reinforce democratic accountability.

A vision for the future was set out in the five Presidents' Report of June 2015 and developed further in a number of other papers in 2017 and 2018. Work is underway to unify Europe's banking sectors and capital markets. Proposals in the EU's next long-term budget (2021–2027) call for the introduction of a European investment stabilisation function that could help sustain investment and facilitate economic recovery in euro-area countries hit by economic shocks; and a reform support programme to provide technical and financial assistance for economic reforms in EU Member States.

The Stability and Growth Pact

With its emphasis on surveillance of EU countries' fiscal policies and public finances, the SGP, strengthened with stricter rules, aims to promote fiscal discipline within EMU and ensure sound government finances. The Commission monitors developments of government deficits and debt, which the treaties require to be less than 3 % and less than 60 % of GDP, respectively. If either of these limits is breached, the Council on the basis of a Commission recommendation can initiate an excessive deficit procedure against the EU country concerned. If no corrective action is taken on time, euro area countries can face financial sanctions.

The European semester

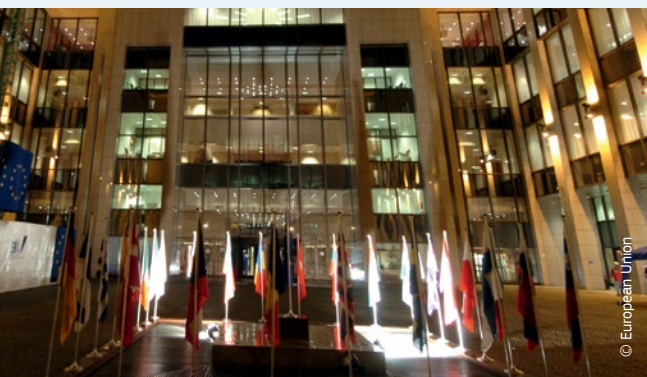
In the first 6 months each year, a period of policy discussion and coordination at EU level increases policy transparency between EU countries because it ensures that all national policies are analysed and assessed together before governments draw up their draft budgets. The commonly agreed policies can then be implemented in each EU country in the second half of each year.

A deeper and fairer economic and monetary union

The EU has taken a number of important steps in recent years to create a deeper and fairer economic and monetary union that benefits all its members and citizens. Policies to unite and improve financial markets have been introduced and economic and fiscal policy coordination has been stepped up. But more still needs to be

The macroeconomic imbalance procedure

The aim of the procedure is to avoid and correct serious gaps in competitiveness and major macroeconomic imbalances in EU countries. Examples of imbalances are a country's deteriorating export market shares, a high level of private sector indebtedness, or risky asset price bubbles. A number of such problems were building up in the decade before the economic and financial crisis. If unaddressed, the build-up of such imbalances could spill over and affect other EU countries. The Commission therefore screens EU countries based on a scoreboard of macroeconomic indicators and other detailed information. This allows the Commission and the Council to make recommendations to the EU countries concerned at an early stage, before imbalances grow and become harmful. In more serious cases, corrective measures are needed and are backed up by strict rules in the form of an excessive imbalance procedure. This also provides for better handling through intensified dialogue and better enforcement, ultimately, through financial sanctions for euro area countries that do not follow recommendations.



Justus Lipsius building of the Council in Brussels

Looking forward to euro-area enlargement

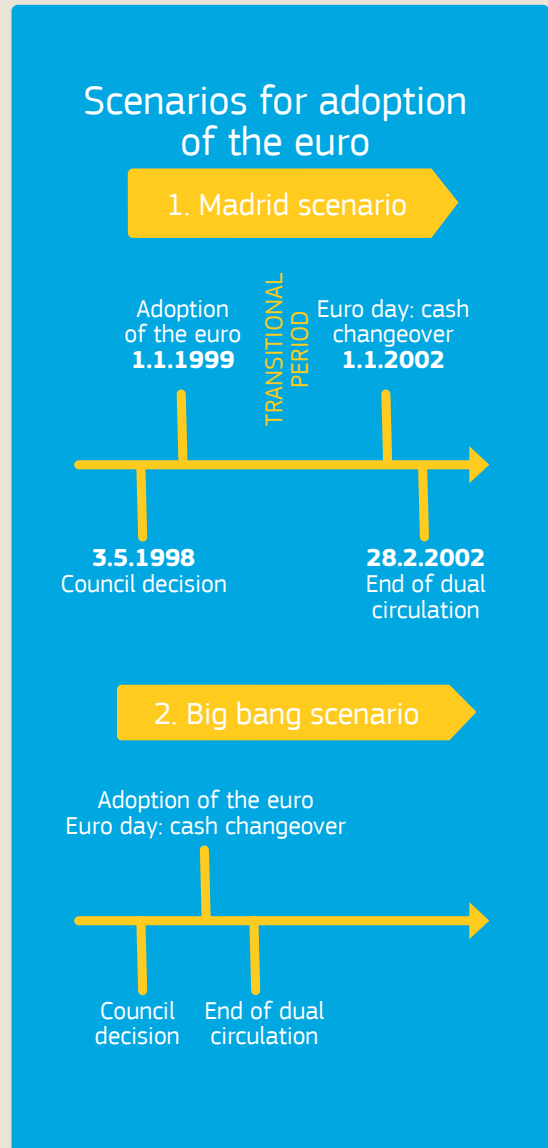
The EU countries that joined the EU after the introduction of the euro are part of EMU — which means that they coordinate their economic policymaking with the other EU countries and that their central banks are part of the ESCB. However, as they did not join the euro area immediately upon accession, their official status until they adopt the single currency is ‘Member States with a derogation’. This status is granted by the Act of Accession and obliges them to become full members of the euro area eventually. The new EU countries did not join the euro area immediately upon accession because they did not meet the convergence criteria. The Treaty of Accession therefore allows them time to undertake the adjustments needed to achieve convergence. The first of the new EU countries to join the euro area was Slovenia in 2007, followed by Cyprus and Malta in 2008, Slovakia in 2009, Estonia in 2011, Latvia in 2014 and Lithuania in 2015.

The need for convergence

The convergence criteria — the Maastricht criteria — are the economic targets and institutional changes that a country must achieve before adopting the single currency and entering the euro area. The macroeconomic indicators shown in Table 1 (page 6) are used as a measure of convergence.

Scenarios for adoption

While countries that want to join the euro area have to meet the convergence criteria, the actual process of introducing the euro may differ among later entrants. When the euro area was created, the founding EU countries had a 3-year transitional period between adopting the euro as ‘book money’ for non-cash transactions in 1999 and the introduction of euro cash in 2002. In this ‘Madrid scenario’, as it is called, a 3-year transitional period allowed individuals and businesses to prepare for the single currency before it appeared in their pockets. During this transitional period, they still used their national currency for cash transactions. However, for all subsequent EU countries of the euro area, the applied scenario is called ‘big bang scenario’ whereby they adopt euro cash immediately upon entering the euro area and quickly withdraw their national currencies from circulation.



The euro area

-  Euro area
-  EU Member State with an opt-out
-  EU Member States that have not yet adopted the euro



Achievements so far

Sound institutions for a sound economy

Despite the problems which have become apparent during the economic and financial crisis, the institutional framework for managing EMU has proved a clear success and reflects the strong commitment of the euro-area countries to further strengthen economic governance where necessary and cooperate on economic issues of 'common concern'. This cooperation is vital for the growth and jobs — and rising living standards — that the single market and EMU support.

Single countries, such as the United States and Japan, have a centralised monetary policy and a centralised **fiscal policy** operated by a single government. In the euro area, things are different. While the euro area has a centralised independent monetary policy operated by the ECB, fiscal policy, which deals with the income and expenditure side of national budgets, is the responsibility of national governments, though subject to a number of rules at EU level. Therefore, the cooperation and coordination between euro-area countries on matters of fiscal policy is the key element that drives economic and monetary union.

EMU is built on several strong groupings that have together proved successful in managing its operations

- The **European System of Central Banks** brings together the central banks of all EU countries. The Eurosystem is the ECB plus the national central banks of those EU countries that have adopted the euro. The ECB determines monetary policy with a clear mission to ensure price stability.
- The **European Commission**, through its Commissioner and Directorate-General for Economic and Financial Affairs, monitors and assesses the economic situation in EU countries and makes recommendations.
- The **Council**, in its Economic and Financial Affairs configuration (Ecofin Council), is where the government ministers for economy and finance from the EU countries meet to define broad economic guidelines and take decisions on recommendations from the Commission, which also takes part in the meetings. Ministers from the euro area meet as the Eurogroup — an informal grouping in which the Commission and the ECB participate.
- The **European Parliament** is also involved in the governance of EMU, mainly via the obligation for the ECB President to report to it regularly and in person. This is known as the 'monetary dialogue'. The Commissioner for Economic and Monetary Affairs also reports to it. And it must be consulted on any decision to admit a new country to the euro area, as well as appointments to the ECB Executive Board.

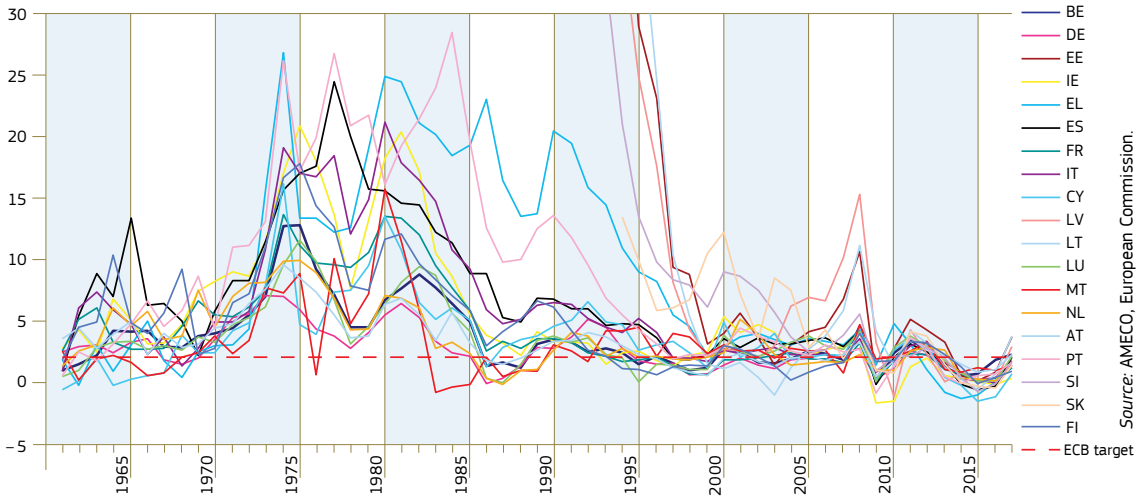


Economic stability — a benefit for all

The currency turbulence and high inflation during much of the 1970s and 80s brought difficulties and uncertainty to many. However, during the build-up to economic and monetary union, inflation fell substantially. Subsequently, inflation has been kept at low levels. The ECB's primary

mission is to control price inflation at an annual level of below, but close to, 2 % inflation over the medium term. The historical development of inflation is shown in the graph below.

Inflation convergence: euro area 19 (annual % increase)



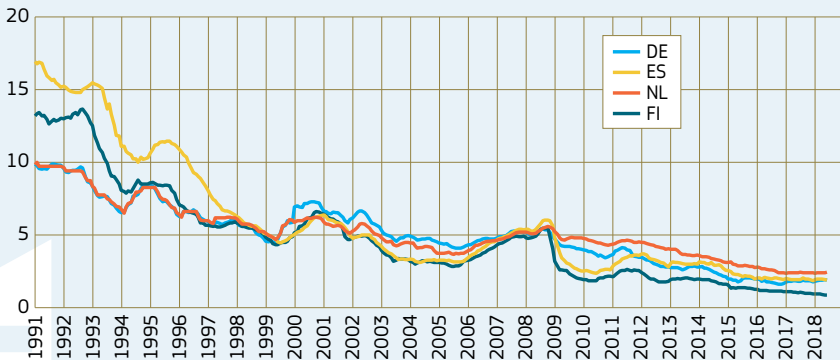
Source: AMECO, European Commission.

The advantages that low inflation and stable prices bring are many and benefit both businesses and consumers.

- Consumer borrowing is less expensive and future repayments less uncertain. So, ordinary citizens can borrow more safely, for example to buy a house or a car, with more certainty about the future repayment levels.
- Businesses have more incentives for investment. When inflation is high and volatile, lenders build in a safety margin to the interest rate, a so-called risk premium. With low, stable inflation these safety margins are no

- longer necessary, so money is released for businesses to invest more — benefiting growth and jobs.
- Society, social cohesion and the less well-off all benefit. Volatile changes in inflation increase the gap between the richer and poorer sections of society. With stable inflation, the less well-off are better protected against erosion of their wealth and purchasing power.

Mortgage rates in four euro-area countries (%)



Sources: Eurostat and ECB.

The single currency — a complement to the single market

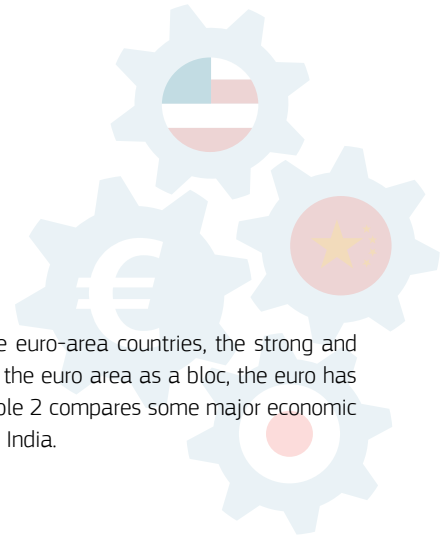
Dealing with multiple currencies entails costs and makes price comparisons difficult, even within the single market. The single currency — the euro — removes these disadvantages and brings benefits to both consumers and businesses.

- The costs of exchanging money at borders, so-called transaction costs, have disappeared in the euro area. This reduces the costs for travellers, whether for business, study or vacation. Previously, an individual with 1 000 Deutschmarks in his or her pocket, who travelled through 15 EU countries, changing money in each one, would have less than 500 marks left on returning home — without having made a single

purchase. Today, someone starting out with EUR 1 000 would return home with the same amount in his or her pocket.

- The euro brings price transparency to the single market. Consumers and businesses can easily compare prices for goods and services across the EU. This has the effect of increasing competition among suppliers and keeping downward pressure on prices in the euro area. This transparency is supported by low, stable price inflation because changes in relative prices can be more easily identified. Competition is further increased by the growth of e-commerce over the internet, which allows easy cross-border price comparisons.
- Transaction costs can be very large — before the adoption of the euro, they were estimated at 0.3-0.4 of GDP in the EU, i.e. EUR 20-25 billion. Companies incurred a large part of these costs as they transferred goods, people and capital around the EU. With the disappearance of transaction costs within the euro area, this money is now available for productive investments in growth and jobs, and intra-EU trade is encouraged. Further, removing transaction costs within the single market makes the euro area attractive for foreign investment.





The international role of the euro

The euro is a strong international currency. Backed by the commitment of the euro-area countries, the strong and visible management of monetary policy by the ECB and the size and power of the euro area as a bloc, the euro has become an attractive world currency like the US dollar or the Japanese yen. Table 2 compares some major economic indicators of the euro area and the EU with the United States, Japan, China and India.

Table 2

Key indicators (2017)	Euro area (19)	EU (27)	United States	Japan	China	India
Population (millions)	341.5	446.4	325.7	126.8	1 386.4	1 339.2
GDP (in EUR trillions calculated at purchasing power parity)	13.1	16.1	17.3	4.8	20.6	8.4
Share of world GDP (% at PPP)	11.6	14.2	15.3	4.3	18.2	7.4
Exports (goods as % of GDP)	34.6 (*)	35.5 (*)	7.9	14.3	18.6	11.6
Imports (goods as % of GDP)	31.0 (*)	32.3 (*)	12.4	13.8	15.1	17.4

(*) Including intra-EA trade in the case of the EA and including intra-EU trade in the case of the EU.

Sources: World Bank, OECD, IMF, Eurostat.

As the table shows, the euro area is a strong and open trading bloc. This openness, combined with the strength of the euro under EMU, brings several advantages.

- The euro area is an attractive destination for trading nations who want to do business within the single market. Euro-area businesses can invoice and pay in euros, which reduces their costs and risk and allows better business planning.
- The euro is an attractive reserve currency for other countries. In 2017, around 20 % of worldwide reserves were held in euros. Around 39 % of the volume of global financial transactions, excluding intra-euro-area payments, is denominated in euros compared to 40 % in US dollars.
- The strength of the euro and its increasing use in international trade gives the euro area

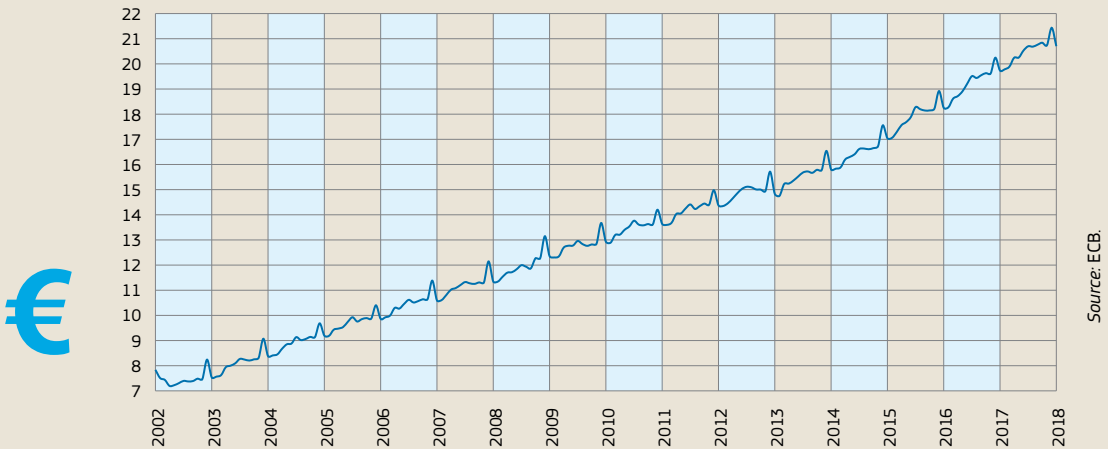
a strong voice in international financial institutions and organisations, such as the International Monetary Fund (IMF), the Organisation for Economic Cooperation and Development (OECD) and the World Bank. While the EU countries are often directly represented on these bodies, the Ecofin Council, the Commission, and the ECB take part separately, or as part of an EU delegation, in relevant meetings of these international organisations.



The euro in numbers

Around 14 billion euro banknotes, worth EUR 633 billion, and 52 billion euro coins — using 250 000 tonnes of metal — were produced in preparation for the euro launch. Around 7.8 billion banknotes worth EUR 140 billion were available in the euro area on the morning of 1 January 2002 when euro cash was launched. Since then, demand has grown continuously, as the graph below shows (the peaks in the growth are due to extra demand for banknotes around the Christmas period).

Total number of euro banknotes in circulation between January 2002 and January 2018 (billion banknotes)



By January 2018, there were over 20.6 billion euro banknotes in circulation with a value of over EUR 1 147 billion and more than 125.9 billion euro coins with a value of more than EUR 27.8 billion. The notes can be withdrawn from all ATMs in the euro area.

The ECB has the exclusive right to authorise the issuance of euro banknotes. Their production is shared between the national central banks. Euro coins are issued by the EU countries of the euro area in volumes approved by the ECB.



The euro in pictures

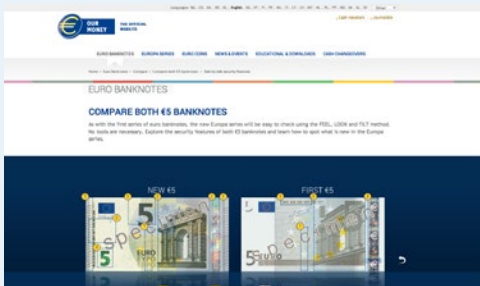
Euro banknotes all have the same designs

These were chosen through a competition organised throughout the EU. The winning designs were inspired by the theme 'the ages and styles of Europe' and depict architectural styles from seven periods of Europe's cultural history: Classical, Romanesque, Gothic, Renaissance, Baroque and Rococo, the age of iron and glass, and modern architecture. All depict elements such as windows, gateways and bridges. Banknotes have different sizes, striking colours and raised areas on the

surface that help the partially sighted recognise the denominations. Since 2013, a new series of banknotes has been introduced. The banknotes still feature the same design as the first series but have been slightly modified to accommodate the enhanced security features. The new banknotes are called the Europa series because two of their security features contain a portrait of Europa — a figure from Greek mythology and the origin of the name of our continent.

Security features

Both euro banknotes and coins have advanced security features to fight counterfeiting. A 'raised' print gives a special feel to banknotes, which also have watermarks, security threads and holograms visible from both sides. Unique metal compositions and machine-readable features protect the coins. The new security features of the Europa series offer even better protection against counterfeiting and make the banknotes even more secure.



The ECB website presents an animation to show the security features: <https://www.ecb.europa.eu/euro/banknotes/security/html/index.en.html>

The ECB has decided to stop producing the EUR 500 banknote, although the first series EUR 500 remains legal tender.

Euro coins have different designs

Euro coins have a common design on one side, and a country-specific design on the reverse. Each euro-area member chooses its own series of designs, reflecting its specific history or culture — often selected by competition. As well as the euro-area countries, Andorra, Monaco, San Marino and the Vatican City have permission to produce euro coins. The common designs show a map of Europe, which, in the case of the larger denominations, differs depending on when the coin was issued (the older coins show the EU before 2004; the newer ones, introduced from 2007 onwards, show the whole of Europe to reflect the enlargement of the Union).

This page shows the 5 cent, 50 cent, EUR 1 and EUR 2 coins of each euro-area Member State. A complete set of all the euro coins can be seen at: www.ec.europa.eu/euro



Special designs for special events



Each Member State of the euro area can issue a EUR 2 commemorative coin twice a year. These coins have the same features and properties and the same common side as normal EUR 2 coins. What makes them different is their commemorative design on the national side.

Common commemorative designs

On the occasion of four anniversaries, all euro area countries issued a EUR 2 coin with the same design on their national sides: 50 years of the Treaty of Rome, 10 years of EMU, 10 years of euro banknotes and coins, and the 30th anniversary of the EU flag.

Glossary



Bretton Woods System: this was a system of international monetary management agreed in 1944 between the world's major industrial powers. It required the signatories to link their currencies to the price of gold and thus support international monetary stability.

Central bank: a national bank that manages a country's money reserves and controls the physical supply of money.

The Council (Council of the European Union): comprises the representatives of the governments of the EU countries. It is the decision-making body of the European Union. Government representatives meet in different Council configurations; for instance, the government ministers responsible for environmental matters meet in the Environment Council.

Ecofin: the Council of the European Union in its configuration comprising the ministers for economy and finance of EU countries.

EC Treaty: see Treaty of Rome.

EU economic governance rules: a set of EU rules which strengthen the Stability and Growth Pact and set up the macroeconomic imbalance procedure.

Eurogroup: the ministers for economics and finance of the euro area countries.

European Central Bank (ECB): the central bank for the euro area. The ECB independently manages the monetary policy of the euro area.

European Commission: the European Commission is one of the main institutions of the European Union. It represents and upholds the interests of the EU as a whole. It drafts proposals for new European laws. It manages the day-to-day business of implementing EU policies and spending EU funds.

European Council: meetings of the Heads of State or Government of the EU countries and the President of the European Commission.

European Monetary System (EMS): a system for managing currency fluctuations, put in place by the European Community in 1979 to replace the 'snake in the tunnel'.

European Parliament: with members from all EU countries, directly elected by EU citizens, Parliament shares responsibility with the Council for passing European laws, though with varying powers in different fields of activity. In EMU, it helps shape both legislation and the broader policy debate through its Committee on Economic and Monetary Affairs.

European System of Central Banks (ESCB): comprises the central banks of the EU and the ECB.

Eurosystem: part of the ESCB that consists of the central banks of the euro area and the ECB.

Exchange rate mechanism (ERM): a feature of the European monetary system, whereby EMS members agreed to maintain the relative prices of their currencies within narrow limits against the European currency unit. The ERM was replaced when the euro was introduced in 1999 by ERM II, whereby the currencies of EU countries are linked to the euro within a fluctuation band of $\pm 15\%$.

Fiscal policy: concerns the management of government revenues (e.g. taxation) and expenditure (e.g. spending on healthcare).

Maastricht Treaty (Treaty on European Union): signed in 1992 in the Dutch city of Maastricht between the Member States of the European Community, the Maastricht Treaty expanded the remit of the European Community, turning it into the European Union and led to the creation of EMU and the euro.

Monetary policy: concerns managing the supply of money in an economy, for example by printing money or setting interest rates.

Single market: a customs union where there are common policies on the freedom of movement of capital, goods, labour and services. A single market is similar to a common market but has more emphasis on removing trade barriers such as technical standards and taxes — it is more 'harmonised'. The EU was a common market at first, and with the Maastricht Treaty in 1992 it became a single market.

Snake in the tunnel: a mechanism to manage currency fluctuations against the US dollar, put in place by the European Community in 1972. 'Snake' refers to the currencies while 'tunnel' refers to the US dollar.

Treaty of Rome (Treaty establishing the European Economic Community): signed in 1957 in Rome, this treaty established the European Economic Community, the forerunner of the European Community. It was renamed 'treaty establishing the European Community' (EC Treaty) by the Maastricht Treaty.



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European Economy explained



ec.europa.eu/info/departments/economic_and_financial_affairs_en

History was made on 1 January 1999 when 11 European Union countries created a monetary union with a single currency, the euro.

Euro banknotes and coins entered circulation on 1 January 2002. But the history of Europe's common currency has been a long time in the making and can be charted back to the origins of the European Union itself. More than 60 years after the Treaty of Rome laid the foundations of today's EU, the euro is the most visible symbol of European integration and an integral part of its vision for the future.

This booklet describes the euro's journey to date and its position in the world today. It is available from the European Commission at

https://ec.europa.eu/info/business-economy-euro/economy-finance-and-euro-publications_en



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