What is quantitative easing?
Central banks normally regulate the quantity of money in the economy by altering its price in the form of the interest rate, which makes demand expand or contract. Once interest rates get down towards zero, they cannot be cut any further. (Unless, that is, the central bank starts charging people for holding money, for example by putting expiry dates on currency, but that would be difficult to pull off.)

So the only way to get more money into the economy is to pump it in by other means. In an economy that ran entirely on banknotes, this would just mean setting the printing presses going. In a credit-based financial system it means taking actions such as buying long-term government bonds. This means taking less liquid financial assets out of the system and holding them on the central bank’s balance sheet, and replacing them with cash.

What is the aim of this?
The scenario that causes central bankers to wake sweating in the night is an uncontrolled deflation – that is, a fall in the general level of prices at a time when the economy is weak. If interest rates are already at zero, falling prices mean that the real rate of interest starts rising. This hurts companies and consumers who have borrowed money. Since consumers’ wages, and the prices of goods and services that companies sell, are actually falling, they will struggle to pay back loans. Pushing cash into the economy is intended to keep up demand and prevent deflation taking hold.

If the central bank wants to do it this way, it can essentially create money and give it to the government to spend, forcing up the demand for goods and services and preventing prices falling.

What is the US Federal Reserve up to?
Rather than say in advance precisely what it will do, or announce specific targets for the money supply, the Fed is basically telling everyone that it will do whatever it takes to push cash into the economy. It has already bought a lot of short-term assets issued by banks and companies. It is now suggesting it might buy a lot more longer-term assets such as bonds issued by Fannie Mae and Freddie Mac, the mortgage agencies that are now controlled by the government, or government bonds (US Treasuries).
Is there a limit to this? What are the risks?
Since the central bank is a monopolist which can create money without limit, it can carry on pumping out as much as it wants. The risk is not that it will run out of money but that the situation will suddenly flip and prices will start rising uncontrollably. This would almost certainly be accompanied by a collapse in the currency on the foreign exchanges.

Such currency crises and “hyperinflations” are what bedevilled Latin American countries for decades. Quantitative easing is a high-risk option, to be taken when other solutions have failed.