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Centre number

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Surname *StemUp Model Solution*

Forename(s)

Candidate signature

I declare this is my own work.

INTERNATIONAL AS ECONOMICS

Unit 2 The National Economy in a Global Environment

A

Monday 9 January 2023 07:00 GMT Time allowed: 1 hour 45 minutes

Materials

For this paper you must have:

- the source booklet, provided as an insert (enclosed)
- a calculator, which you are expected to use where appropriate.

Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do **not** write outside the box around each page or on blank pages.
- Do **not** write in the source booklet.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- All working must be shown.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 80.
- You may use a bilingual dictionary for this exam.
- You may **not** use an English dictionary.

For Examiner's Use	
Question	Mark
1–15	
16	
17	
18	
19	
20	
21	
TOTAL	



J A N 2 3 E C 0 2 0 1

Section AAnswer **all** questions in the spaces provided.Only **one** answer per question is allowed.

For each question completely fill in the circle alongside the appropriate answer.

CORRECT METHOD



WRONG METHODS



If you want to change your answer you must cross out your original answer as shown.



If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.

**0 1**

Which one of the following combinations shows macroeconomic indicators that are commonly used to measure economic growth, inflation and inequality?

[1 mark]

	Economic growth	Inflation	Inequality	
A	Nominal GDP per capita	Price level	Gini coefficient	☐
B	Rate of change in real GDP	Rate of change in the consumer price index	Gini coefficient	☒
C	Real GDP	Price level	Labour Force Survey	☐
D	Real GDP per capita	Rate of change in the consumer price index	Labour Force Survey	☐

0 2

The main aim of a supply-side policy is to increase

[1 mark]**A** living standards.☐**B** long-run aggregate supply.☒**C** short-run aggregate supply.☐**D** wage rates.☐

0 3

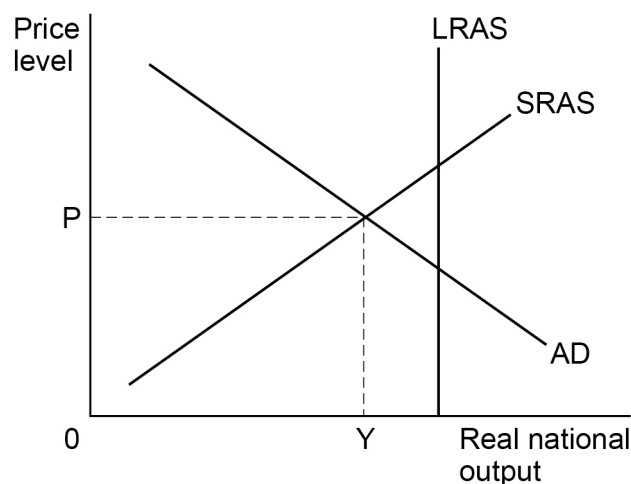
The value of the multiplier in an economy is 2.5

An injection into the economy causes national income to rise by \$500m.

What was the value of this initial injection into the economy?

[1 mark]**A** \$143m☐**B** \$200m☒**C** \$250m☐**D** \$1250m☐**0 4**

Figure 1 shows the aggregate demand (AD), short-run aggregate supply (SRAS) and long-run aggregate supply (LRAS) curves for an economy. The economy is initially in equilibrium.

Figure 1

This economy now experiences a fall in the savings ratio.

All other things being equal, what is the most likely impact of this change?

[1 mark]**A** A decrease in employment☐**B** A decrease in the price level☐**C** An increase in real national output☒**D** An increase in the full employment level of output☐**Turn over ►**

0 5

Which one of the following statements about types of unemployment is true?

[1 mark]

- A** Cyclical unemployment occurs as a result of workers having the wrong skills for the available jobs.
- B** Frictional unemployment is due to immobility of labour and occurs as a result of workers moving between jobs.
- C** Seasonal unemployment only occurs in countries where the weather changes during the year.
- D** Structural unemployment is caused by a lack of aggregate demand during a recession.

☐☒☐☐

0 6

Table 1 shows the injections and withdrawals in real terms for an economy for two years, in \$bn.

Table 1

Injections and withdrawals	2020 (\$bn)	2021 (\$bn)
Exports	450	475
Government spending	300	275
Investment	500	550
Imports	500	525
Saving	200	300
Tax	300	320

All other things being equal, which one of the following can be concluded from the data?

[1 mark]

- A** Real national output has increased.
- B** The current account deficit has increased.
- C** The government's budget is balanced in both years.
- D** The value of injections has increased.

☐☐☐☒

0 7

An economy experiences economic growth but this may cause a possible conflict with other macroeconomic objectives.

Which one of the following is the most likely conflict as a result of this growth?

[1 mark]

A A decrease in the budget surplus

☐

B An increase in the savings rate

☐

C An increase in the unemployment rate

☐

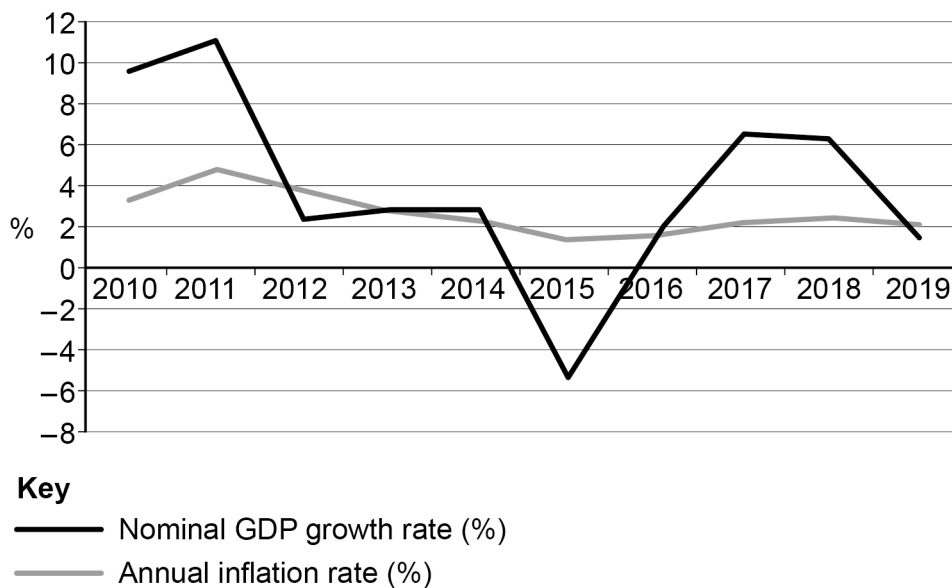
D Increasing inflationary pressure

☒

0 8

Figure 2 shows the world's nominal GDP growth rate (%) and the world's annual inflation rate (%) from 2010 to 2019.

Figure 2



Which one of the following can be concluded from the data?

[1 mark]

A Prices were highest in 2011.

☐

B Productivity increased from 2015 to 2017.

☐

C Real GDP decreased between 2014 and 2016.

☒

D Real GDP was highest in 2011.

☐

Turn over ►



0 9

Table 2 shows the total amount paid in indirect tax by different household income groups in the UK in 2019, in Pound Sterling (£). The households have been divided into five equal-sized groups, according to their income.

Table 2

Income group	Average total amount paid in indirect tax (£)	Average total income (after benefits and before tax, £)
Poorest 20%	3621	14 772
Next 20%	4488	25 044
Middle 20%	5907	35 858
Next 20%	6764	49 821
Richest 20%	9778	107 695

Which one of the following can be concluded from the data?

[1 mark]

- A** Every household in the 'Middle 20%' had a total income of £35 858
- B** Indirect tax in the UK was regressive.
- C** Indirect tax was the same proportion of income for all income levels.
- D** The 'Richest 20%' received the least amount in benefits.

☐☒☐☐

1 0

Table 3 shows government spending on welfare benefits, such as unemployment benefits, in six different economies. The spending is given as a percentage of GDP.

Table 3

	Chile	Estonia	Japan	Netherlands	Turkey	United States
Percentage of GDP spent on welfare benefits (%)	11.4	17.7	22.3	16.1	12.0	18.7

Which one of the following can be concluded from the data?

[1 mark]

- A** Chile has the lowest tax revenue as a percentage of GDP. ☐
- B** Japan's government spends the most money in total on welfare benefits. ☐
- C** The mean percentage of GDP spent on welfare benefits is approximately 16.9%. ☐
- D** The median percentage of GDP spent on welfare benefits is 16.9%. ☒

Turn over for the next question

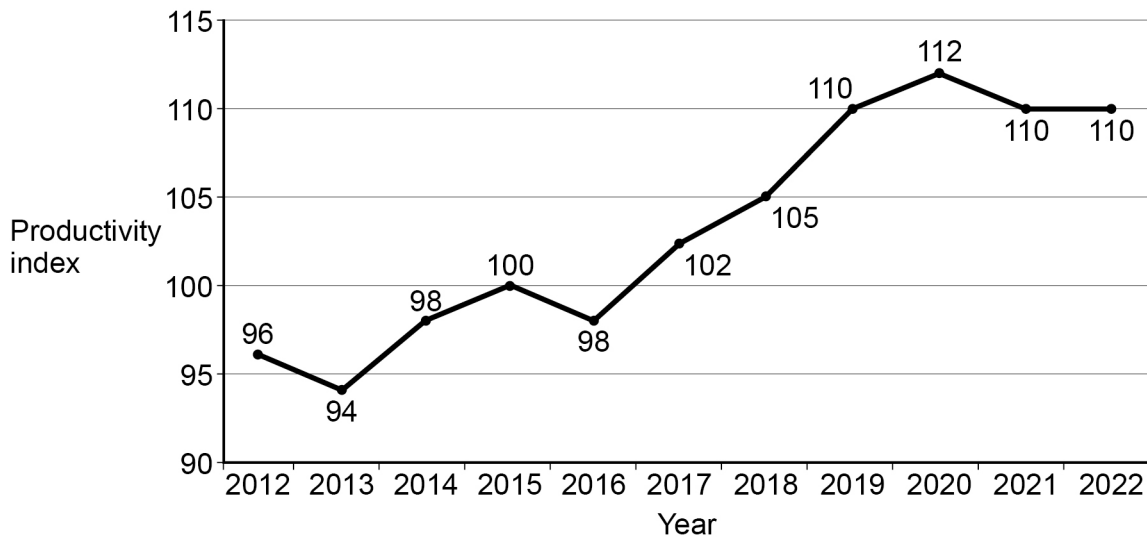
Turn over ►



1 1

Figure 3 below shows an economy's productivity index from 2012 to 2022 (2015 = 100).

Figure 3



From the data, it can be concluded that

[1 mark]

- A** production was highest in 2020.
- B** productivity was 12% higher in 2020 than in 2015.
- C** productivity was 96% less in 2012 than it was in 2015.
- D** the economy was in recession from 2012 to 2015.

☐
☒
☐
☐

1 2

Which one of the following best defines the accelerator process?

An increase in

[1 mark]

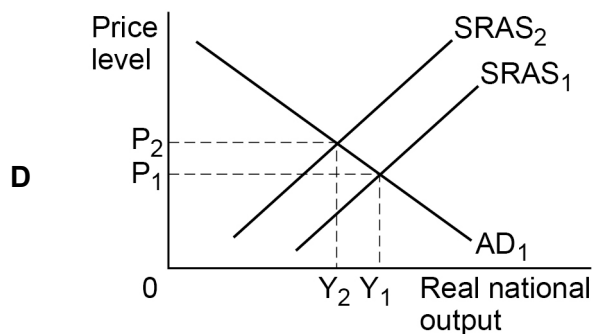
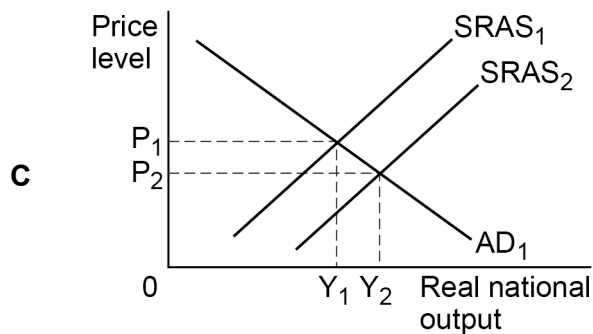
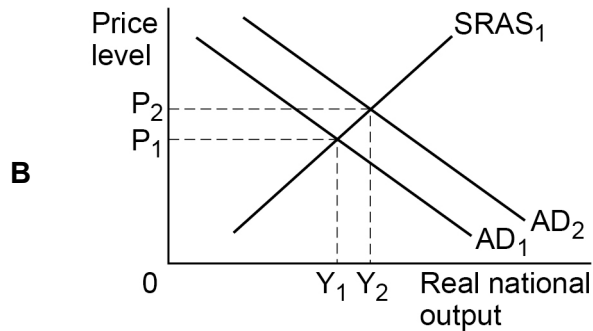
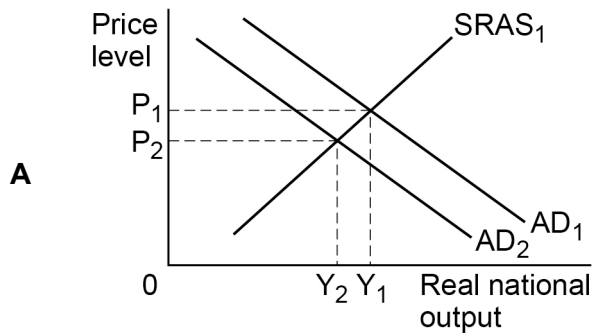
- A** a firm's output and therefore increasing demand for labour.
- B** an injection leading to a greater increase in real national output.
- C** national output leading to an increase in investment.
- D** the total productive potential of an economy.

☐
☐
☒
☐


1 3

The diagrams below show the initial aggregate demand (AD_1) and short-run aggregate supply ($SRAS_1$) curves for an economy. The government of this economy changes its fiscal policy so that it has a budget surplus instead of a budget deficit.

All other things being equal, which one of the following diagrams shows the most likely impact of this change in fiscal policy?

[1 mark]**Turn over ►**

1 4

Which one of the following statements about output gaps is correct?

[1 mark]

- A** A negative output gap can only exist when an economy's real national output is decreasing.
- B** A negative output gap occurs when there is cyclical unemployment in an economy.
- C** A positive output gap exists when potential output is greater than actual output.
- D** A positive output gap usually leads to decreasing inflationary pressure.

☐☒☐☐**1 5**

Which one of the following is the most likely impact of a significant fall in the value of the US dollar (\$) against other currencies?

[1 mark]

- A** Cost-push inflationary pressure in the US will decrease.
- B** The budget deficit of the US will decrease.
- C** The deficit on the US trade in goods will worsen.
- D** The price of raw materials imported into the US will increase.

☐☐☐☒**15**

Section B

Look at the Source Booklet and answer **all** questions in the spaces provided.

Do **not** write in the Source Booklet.

1 6 . 1 Define 'interest rate' (**Extract B**, line 5).

[3 marks]

The interest rate is the price of money: it is the cost of borrowing and the reward for saving, expressed as a percentage of the amount borrowed or saved over a period of time, usually per year.

1 6 . 2 Define 'current account deficit' (**Extract C**, line 2).

[3 marks]

A current account deficit occurs when the total value of debits (money flowing out of the country) is greater than the total value of credits (money flowing in) across the sum of trade in goods, trade in services, net primary income and net secondary income, so the overall balance is negative.

6

Turn over for the next question

Turn over ►



1 7

Extract A shows data on consumer prices, export prices and the current account balance as a proportion of GDP for Japan from 2010 to 2020.

You are advised to show your working for the calculations below.

1 7 . 1

Using **Extract A (i)**, calculate the percentage change in Japan's export price index between 2010 and 2020.

Give your answer to **one** decimal place.

[2 marks]

$$\% \text{ change} = ((\text{new} - \text{old}) \div \text{old}) \times 100$$

$$= ((92.5 - 103) \div 103) \times 100 = (-10.5 \div 103) \times 100 = -10.194\ldots\%$$

$$\text{Answer} = -10.2\% \text{ (a fall of 10.2\%)}$$

1 7 . 2

In 2020:

- Japan's deficit on trade in goods and services was ¥40 800m
- Japan's net primary income on current account was a surplus of ¥1 732 000m
- Japan's net secondary income on current account was a deficit of ¥210 700m.

Using **Extract A (ii)**, calculate Japan's GDP in 2020.

[4 marks]

$$\text{Current account} = \text{trade in goods and services} + \text{net primary income} + \text{net secondary income}$$

$$= -¥40\,800\text{m} + ¥1\,732\,000\text{m} - ¥210\,700\text{m} = ¥1\,480\,500\text{m (surplus)}$$

$$\text{Extract A (ii): the current account surplus was 3.2\% of GDP in 2020, so}$$

$$\text{GDP} = ¥1\,480\,500\text{m} \times (100 \div 3.2)$$

$$\text{Answer: Japan's GDP in 2020} = ¥46\,265\,625\text{m}$$



1 8

Extract C (line 11) states: 'The price of exports can be affected by the inflation rate'.

1 8

. 1

Explain why inflation can cause export prices to rise.

[6 marks]

Inflation is a sustained rise in the general price level, and export prices are the prices of goods and services produced domestically and sold abroad, usually shown by an export price index.

Demand-pull inflation happens when aggregate demand grows faster than the economy's capacity, so firms raise the prices of all their goods. Since exports are domestically produced goods, if their domestic prices rise and they are also sold abroad, export prices will rise, ceteris paribus.

Inflation also raises firms' costs. Workers demand higher money wages to protect their real income, and the prices of raw materials, energy and other factors of production rise. This cost-push effect increases the cost of producing each unit of output, so to protect profit margins exporters pass the higher costs on in higher export prices.

So, unless the exchange rate falls to offset it, domestic inflation makes exports more expensive.

Question 18 continues on the next page**Turn over ►**

1 8 . 2

To what extent do the data suggest that inflation causes export prices to rise?

Use the data in **Extract A (i)** to help support your answer.

[6 marks]

Over 2010 to 2020 as a whole, the data do not support the claim. Japan's consumer price index rose from 96.5 to 101.8, an increase of 5.5%, yet the export price index fell from 103 to 92.5, a fall of 10.2%, the opposite direction. From 2012 to 2015 there is some support: the CPI rose from about 96 to 100 (4.2%) while export prices rose from about 85 to 100 (17.6%), though export prices rose far more than domestic prices. But from 2010 to 2012 the CPI was constant at about 96 while export prices fell sharply from 103 to 85.5, and from 2015 to 2020 the CPI barely changed while export prices fluctuated between 100 and 92.5, so other factors must be driving export prices. The two indices cover different, differently weighted baskets, and export prices also depend on the exchange rate and world demand, for which we have no data. The link may differ in other countries and years. Overall there is little evidence that inflation raised Japan's export prices; if anything the relationship appears inverse.

12

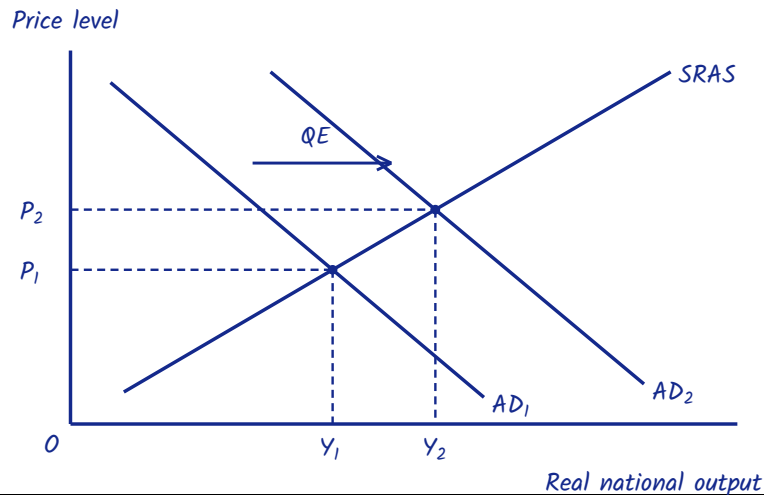


1 9

Extract B (lines 7–8) states: ‘By 2013, the Bank of Japan decided that it should aim to raise inflation back to the 2% target and increase real national output. This time, it used quantitative easing.’

With the help of a diagram, explain how quantitative easing might lead to an increase in real national output.

[9 marks]



Monetary policy is the use of interest rates, the money supply and the exchange rate by the central bank to influence the economy. Quantitative easing (QE) is when the central bank creates electronic money and uses it to buy assets, mainly government bonds, from banks and other financial institutions, as the Bank of Japan did with its purchases of government bonds (Extract B).

The banks receive cash reserves in exchange for less liquid bonds, so they have more money to lend to households and firms. The extra demand for bonds also raises bond prices and so lowers their yield, and the larger money supply lowers interest rates across the economy. Cheaper and more available credit reduces the reward for saving and encourages borrowing, so consumption rises, for example on

Extra space cars and houses, and firms invest more as more projects become profitable.

As C and I are components of $AD = C + I + G + (X - M)$, AD shifts right from AD_1 to AD_2 . Firms respond to higher demand by producing more, so real national output rises from Y_1 to Y_2 , and through the multiplier the rise in output is

Turn over ►



greater than the initial rise in spending. The price level rises from P_1 to P_2 , helping Japan move towards its 2% inflation target. Lower interest rates may also depreciate the yen, raising net exports and AD further.

9

2 0

Extract C (lines 2–3) states: ‘Japan usually runs a large current account surplus.’

Analyse the possible causes of a current account surplus.

[12 marks]

A current account surplus is when the total credits on the current account (exports of goods and services plus inflows of primary and secondary income) exceed the total debits, so the sum of the trade balance, net primary income and net secondary income is positive.

One cause is a weak currency. If the exchange rate is low, a country's exports are relatively cheap in foreign currency and imports are relatively expensive in domestic currency. Demand for exports rises and households and firms switch from imports to domestic goods, so, *ceteris paribus* and if demand is price elastic, export revenue rises, spending on imports falls and the trade balance moves into surplus.

Low inflation has a similar effect. If domestic prices rise more slowly than those of trading partners, as with Japan's deflation and low inflation, exports become more internationally price competitive, encouraging demand for exports, while domestic goods are cheaper than imports.

High productivity also helps. Japan's technological improvements and more women entering the labour force increase LRAS, which reduces inflationary pressure and unit costs, improving the price competitiveness of exports. Non-price factors matter



too: high quality, high value-added goods such as Japan's vehicles, IT and capital goods are essential items, so demand for them stays high even if prices rise, and growth in main export markets raises demand for them further.

Government action can cause a surplus. Subsidies for export industries lower their costs and prices, while tariffs, such as Japan's taxes on agricultural imports, make imports dearer and reduce the quantity bought. Low shipping and trade costs also help exporters.

Low domestic demand reduces imports. Japan's falling population and high saving mean less spending on consumer goods, including imports, so even with steady

Extra space exports the trade balance improves.

Finally, a surplus can come from income flows. A country that has invested heavily abroad, like Japan, receives large profits, interest and dividends, giving a surplus on net primary income: in 2020 Japan had a primary income surplus of ¥1 732 000m despite a trade deficit, so this was the main cause of its surplus. Remittances from nationals working abroad add to secondary income.

These causes often reinforce each other. Japan's low inflation keeps its goods competitive, its high saving holds down imports, and its overseas investment earnings grow each year, so its surplus is persistent, although a strengthening yen or recovery in domestic demand could reduce it.

Turn over for the next question

Turn over ►



2 1

Extract B (lines 1–3) states: ‘The Bank of Japan (Japan’s central bank) uses monetary policy to achieve price stability, although in recent years the Bank has also used monetary policy to help achieve other macroeconomic objectives.’

Use the extracts and your knowledge of economics to discuss the likely effects of Japan’s recent monetary policy on its economic performance.

[20 marks]

Monetary policy is the use of interest rates, the money supply (including quantitative easing) and the exchange rate by the central bank to achieve macroeconomic objectives. Economic performance is judged against these objectives: price stability, economic growth, low unemployment, a satisfactory current account position and, more widely, a fair distribution of income.

Japan's starting position was poor. It experienced deflation until 2014 and only about 1% inflation since, well below the 2% target, and there was a recession in 2014 with growth only returning by 2017. In response the Bank of Japan cut its interest rate to 0% and, because rates could not usefully be cut further, used QE, buying government bonds worth ¥70tn and then ¥80tn a year.

Very low interest rates make borrowing cheaper and reduce the reward for saving, so households should borrow and spend more, and firms should invest more as the cost of financing capital falls. QE reinforces this: banks receive extra reserves to lend, and bond yields fall, pushing other interest rates down. Higher consumption and investment shift AD to the right, so real national output and employment rise through the multiplier, and the price level should rise from a deflationary position back towards the 2% target. Ending deflation matters because falling prices lead consumers to delay purchases, raise the real value of debt and squeeze profits. In the diagram below, AD shifts from AD_1 to AD_2 : output rises from Y_1 to Y_2 towards full employment output Y_{fe} and the price level rises from P_1 to P_2 .

Low interest rates also reduce hot money inflows, so demand for the yen falls and the yen depreciates. Japanese exports such as vehicles and capital goods become cheaper abroad and imports more expensive, improving the trade balance, adding to



AD and increasing Japan's already large current account surplus. Import prices rise, which also helps to raise inflation.

However, the evidence suggests the effects have been limited. Despite years of 0% interest rates and huge QE, inflation has stayed at about 1%, below target, and the 2014 recession still occurred. Japan seems to be in a liquidity trap: when confidence is low, households and firms prefer to hold money or repay debt rather than borrow, however cheap credit is, so the extra money stays in banks. The effectiveness of QE also depends on banks being willing to lend.

Structural factors may be stronger than monetary policy. Japan's falling labour force and ageing population reduce consumer spending and the need for new investment, and older people save for retirement. Monetary policy works on the demand side, so it cannot solve these supply-side problems; Japan's rising potential output has come mainly from more women entering the labour force and technological progress, not from the Bank of Japan. If AD grows only in line with this potential output, inflation will stay low.

Monetary policy also has side effects on other aspects of performance. Zero interest rates redistribute income from savers, often pensioners, to borrowers, while QE raises asset prices such as shares and property, which mostly benefits wealthier households, so inequality may worsen. On the other hand, low rates reduce the cost of servicing government debt, improving the budget balance, and help indebted firms survive, which protects jobs but may keep inefficient firms alive and so reduce productivity. A large current account surplus can also cause tensions with trading partners and leaves Japan dependent on world demand.

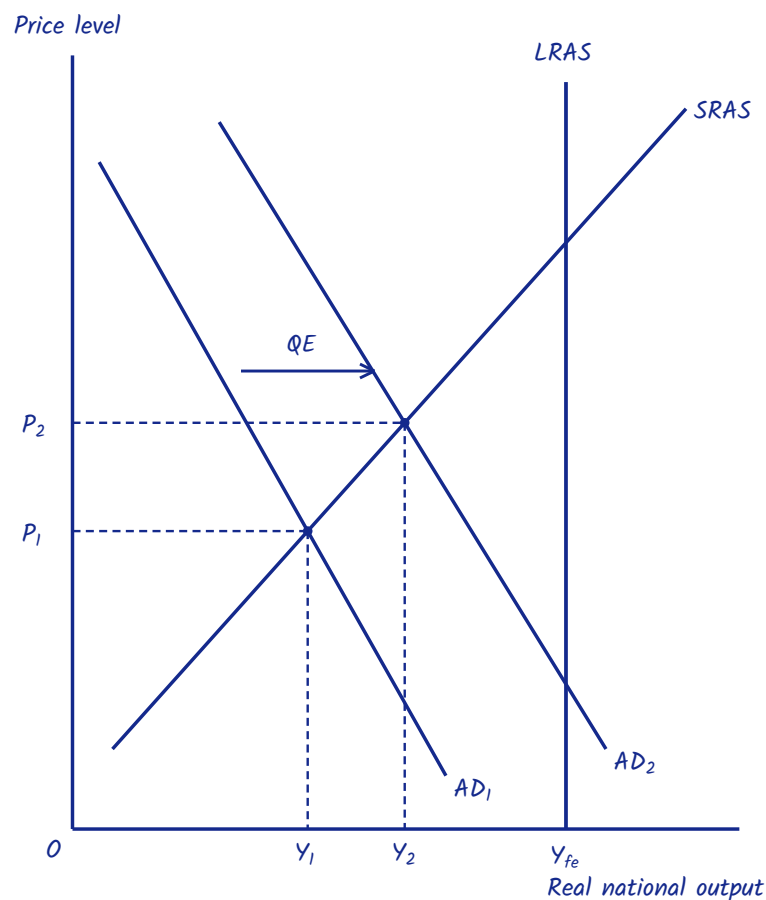
Time lags matter as well: monetary policy takes around 18 months to two years to have its full effect, so the return to growth by 2017 may be partly the result of earlier QE. Other factors, including fiscal policy, such as rises in sales tax, which reduced spending in 2014, and changes in the world economy, also affect

Turn over ►



performance, so it is difficult to isolate the effect of monetary policy.

In conclusion, Japan's recent monetary policy has probably had a positive but modest effect on economic performance. It helped to end deflation, supported the return of growth and employment and, through a weaker yen, added to the current account surplus. However, it has failed to achieve the 2% inflation target, possibly at the cost of greater inequality. How effective it is depends on confidence, the willingness of banks to lend, the responsiveness of exports to the exchange rate and the severity of Japan's demographic problems. Monetary policy alone is unlikely to be enough; it needs to be combined with supply-side policies that raise productivity and with fiscal policy that supports demand.



END OF QUESTIONS



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