Financial Programming and Policies, Part 2
Module 9, Sections 1-3

Previewing Adjustment Strategies

Module Introduction

We previously learned that, under the baseline scenario, Macronia’s faced:

- Internal imbalances – output gap positive, inflation above target.

- External imbalances: net export deficit unsustainable, overvalued real exchange rate.

Module Introduction

The situation "looked manageable" – so long as the external environment remained benign.

But events beyond Macronia's control could make its situation difficult:

- Deterioration of external terms of trade reduced net exports, output.
- External financial pressures / unfavorable reassessment by investors:
- A forced and abrupt correction of net exports, accompanied by a severe recession – a sudden stop scenario.

Module Introduction

Macronia needs to change course.

It needs to adjust – it needs to solidify its prospects, by moving toward both internal and external balance.

But how does that happen?

Module Introduction

Recall also two main macroeconomic policies – and their impacts.

1 – Fiscal policy/domestic absorption:

- Looser (more G, lower T): raise both output and external deficit.
- Tighter (lower G, higher T): reduce both output and external deficit.

2 – Monetary policy/real interest rate:

- Looser (lower r): raise output, depreciate real exchange rate (helps improve net exports)
- Tighter (higher r): reduce output, appreciate real exchange rate (helps deteriorate net exports).

Policy Management Authorities

Distinct authorities typically manage macroeconomic policies:

-- Fiscal Policy --	-- Monetary Policy --
Finance/Planning Ministry	Central Bank

How much fiscal and/or monetary should each authority adjust?

Can we rely only on a monetary adjustment – with no fiscal adjustment?

Can we rely only on a fiscal adjustment – with no monetary adjustment?

Or, do we need some of both?

Module Introduction

Outline for Module 09:

- The Basic Concepts
- Model Scenarios: The Central Bank "goes it alone"
- Model Scenarios: Initial proposal from the Finance Ministry
- Model Scenarios: How much more Fiscal Adjustment?
- Conclusion: Adjustment – getting the balance right.

The Central Bank Goes it Alone

-- Fiscal Policy -- Finance/Planning Ministry	-- Monetary Policy -- Central Bank
PASSIVE – does not adjust	ACTIVE– central bank will address internal imbalances – by itself – on "go it alone" basis. CB simply tries to get inflation back on target … even tighter than under baseline.

Policy Management Authorities

In the uncoordinated approach, or "going it alone"…

-- Fiscal Policy -- Finance/Planning Ministry	-- Monetary Policy -- Central Bank
PASSIVE – does not adjust	ACTIVE– tries to address policy imbalances on a "go it alone" basis.
	An ambitious CB president tries to address the external imbalance problem.

A more ambitious central bank

In order to also address external imbalances, the central bank can tighten even further.

This will bring on a recessionary internal balance – output gap less than zero, inflation below the target. Private investment will be squeezed out even further.

However, despite such a sacrifice, Macronia still does not return to external balance.

Why not?

- True, additional tightening does further reduce imports – again through the output effect.

- However, this additional impact is offset by the impact of even more appreciation of the real exchange rate – again discouraging exports while stimulating imports.

A more ambitious central bank

Supplementary topic: there are circumstances in which the central bank would need to loosen – not tighten – in order to increase the net export balance.

In such a case (which does *not* apply to Macronia):

- The price (exchange rate) effects would dominate the income effects.
- A monetary tightening will reduce output but decrease the net export deficit.

Fiscal adjustment: an initial proposal:

-- Fiscal Policy -- Finance/Planning Ministry	-- Monetary Policy -- Central Bank

Recognizing its role, the fiscal authority makes a proposal: to cut expenditures by 0.7% of potential output.

Question:
Is such an adjustment sufficient to bring Macronia back to internal and external balance?

Activity: How much more adjustment?

We have seen two proposed programs:

1. Central bank “goes it alone”

2. Initial proposal by finance ministry.

“Activity: How much more adjustment?”

Central bank “goes it alone” – “off their initial Taylor rule” -- tightening even more than that rule indicated.

By tightening enough they can eliminate internal imbalances output gap returns to zero and inflation returns to target.

Drawbacks of this strategy:

Private investment crowded out by higher interest rates.

Not easy to regain external balance under this policy.

- Income effect (less imports, shift in nx curve) –
- Largely offset by price effect (real appreciation discourages exports, stimulates imports).

“Activity: How much more adjustment?”

The finance ministry’s initiative: a good step but not enough.

Both internal and external imbalances will be reduced – but not eliminated.

- The output gap remains above zero
- Inflation remains above target

The central bank has eased monetary policy somewhat – along its Taylor rule.

However, the real interest rate remains above the natural rate – real exchange rate is still overvalued relative to its long-run value.

- This helps keep the net export deficit larger than its long run norm.

Fiscal Adjustment Activity

Find a fiscal adjustment that attains both internal and external balance.

Two modalities:

- Fiscal adjustment, no departure from Taylor Rule.
- Fiscal adjustment, departure from Taylor Rule allowed.

First, try some policy experiments. Second, answer some questions.

“Summary: Getting the Adjustment Right”

You have seen several adjustment scenarios.

Under its baseline, Macronia faced both internal and external imbalances.

These imbalances reflected a fiscal expansion (rightward shift of IS curve) along with a monetary tightening along the Taylor Rule.

We found that we could not eliminate the imbalances through a monetary tightening only.

Instead, we found we would be able to eliminate both imbalances in a way that kept the central bank on its Taylor Rule – by finding just the right fiscal adjustment.

“Summary: Getting the Adjustment Right”

We’ve used the model to help you think through the logic of your program.

Now, its your job to design a program for Macronia in your spreadsheet environment; you’ll be using the same analytical framework that you sued in the baseline….

But, the model should guide you in terms of the big picture.

So, good luck.

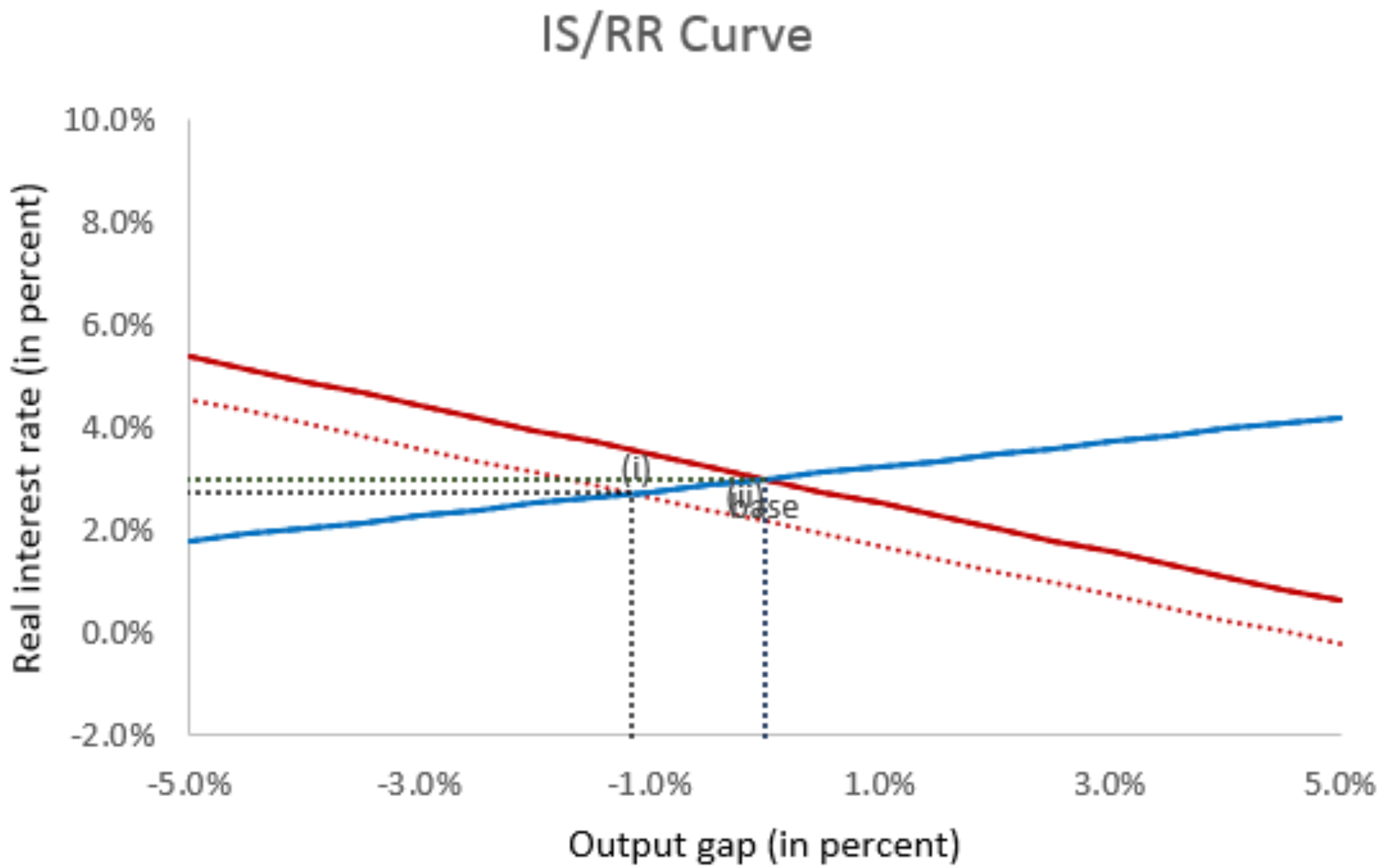
Financial Programming and Policies, Part 2
Module 9, Section 4

Fiscal Expansions to Boost Demand

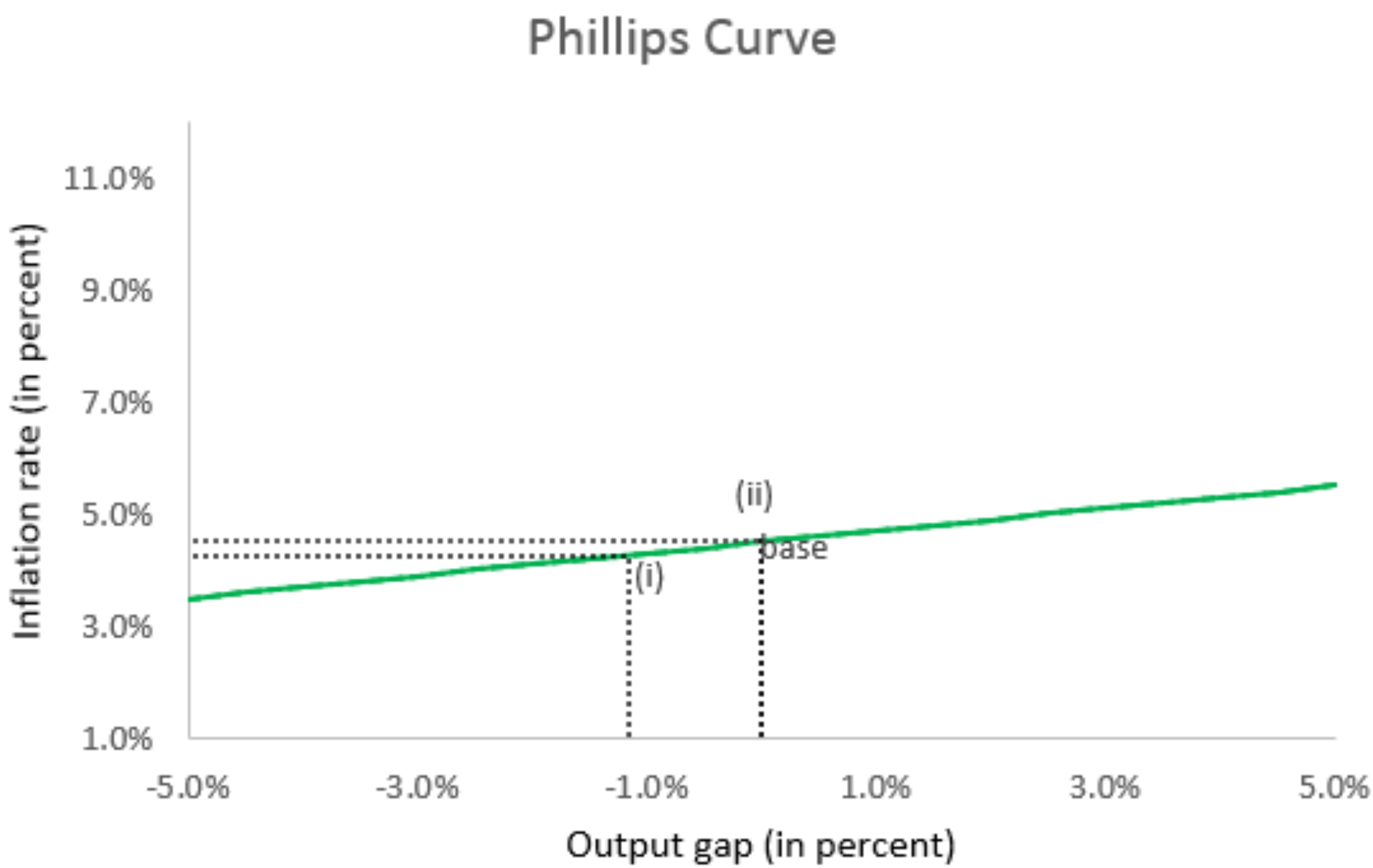
In Review of the Macronia Example

By reducing government spending, we did the following:

- Brought the output gap down;
- Reduced inflation;
- Allowed the central bank to permit a currency depreciation; and
- Helped increase the external balance.



IS/RR Curve
Real interest rate (in percent)
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
(i)
(ii)
base
-5.0%
-3.0%
-1.0%
1.0%
3.0%
5.0%
Output gap (in percent)


Phillips Curve
Inflation rate (in percent)
11.0%
9.0%
7.0%
5.0%
3.0%
1.0%
(ii)
base
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-5.0%
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3.0%
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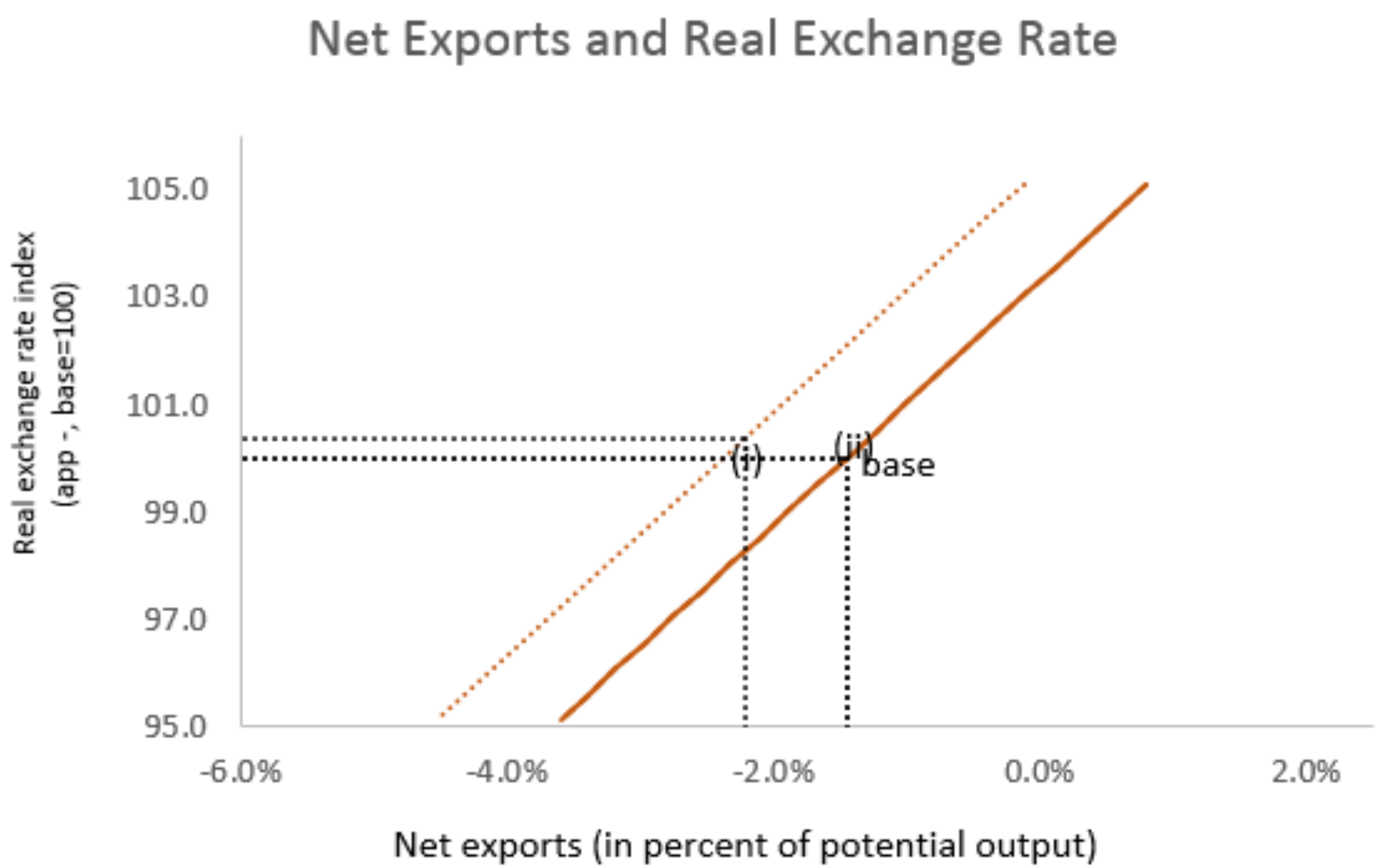
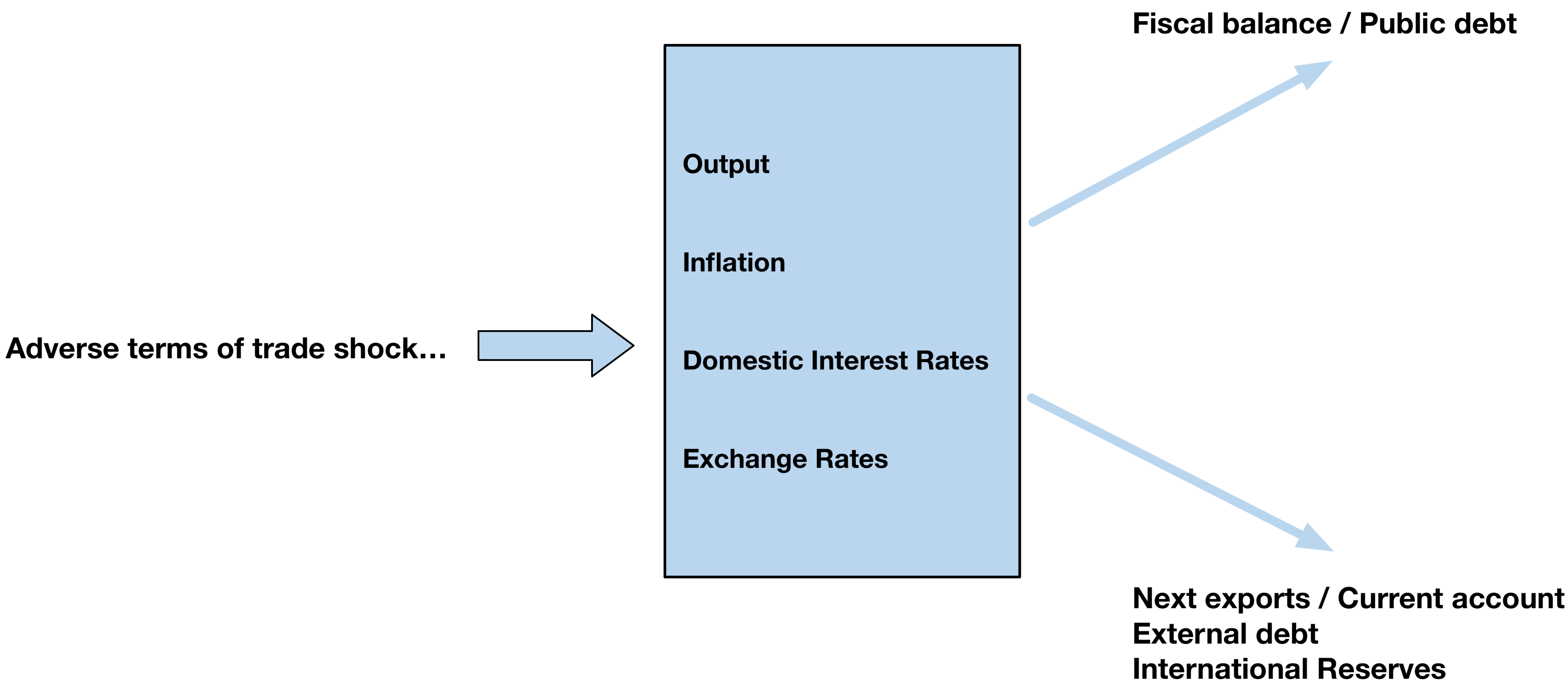
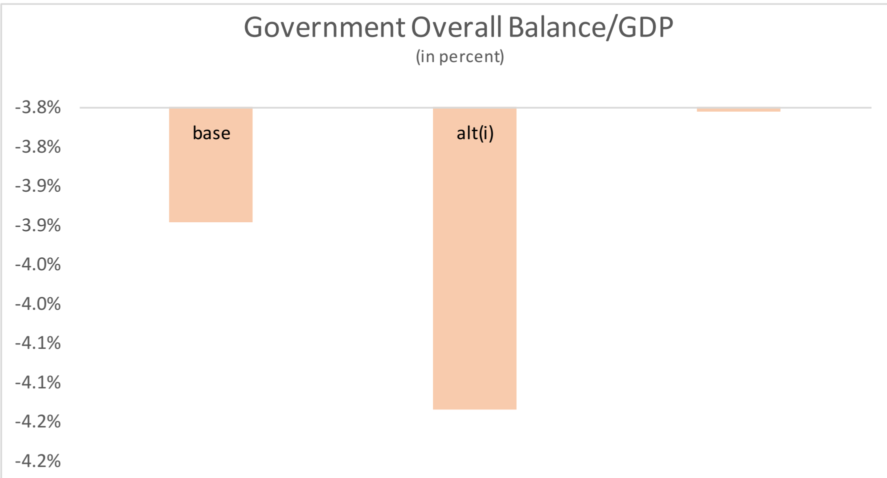
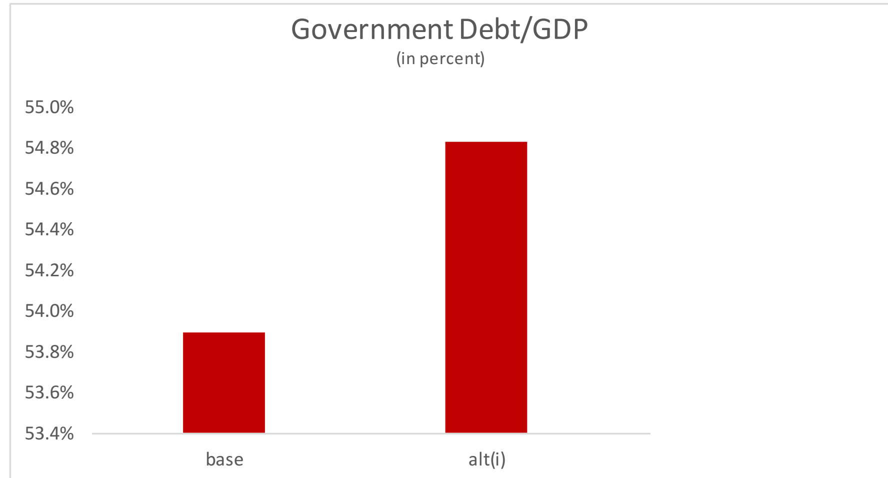
Output gap (in percent)



Net Exports and Real Exchange Rate
Real exchange rate index
(app -, base=100)
105.0
103.0
101.0
99.0
97.0
95.0
(i)
(ii)
base
-6.0%
-4.0%
-2.0%
0.0%
2.0%
Net exports (in percent of potential output)


Adverse terms of trade shock…
Output
Inflation
Domestic Interest Rates
Exchange Rates
Fiscal balance / Public debt
Next exports / Current account
External debt
International Reserves

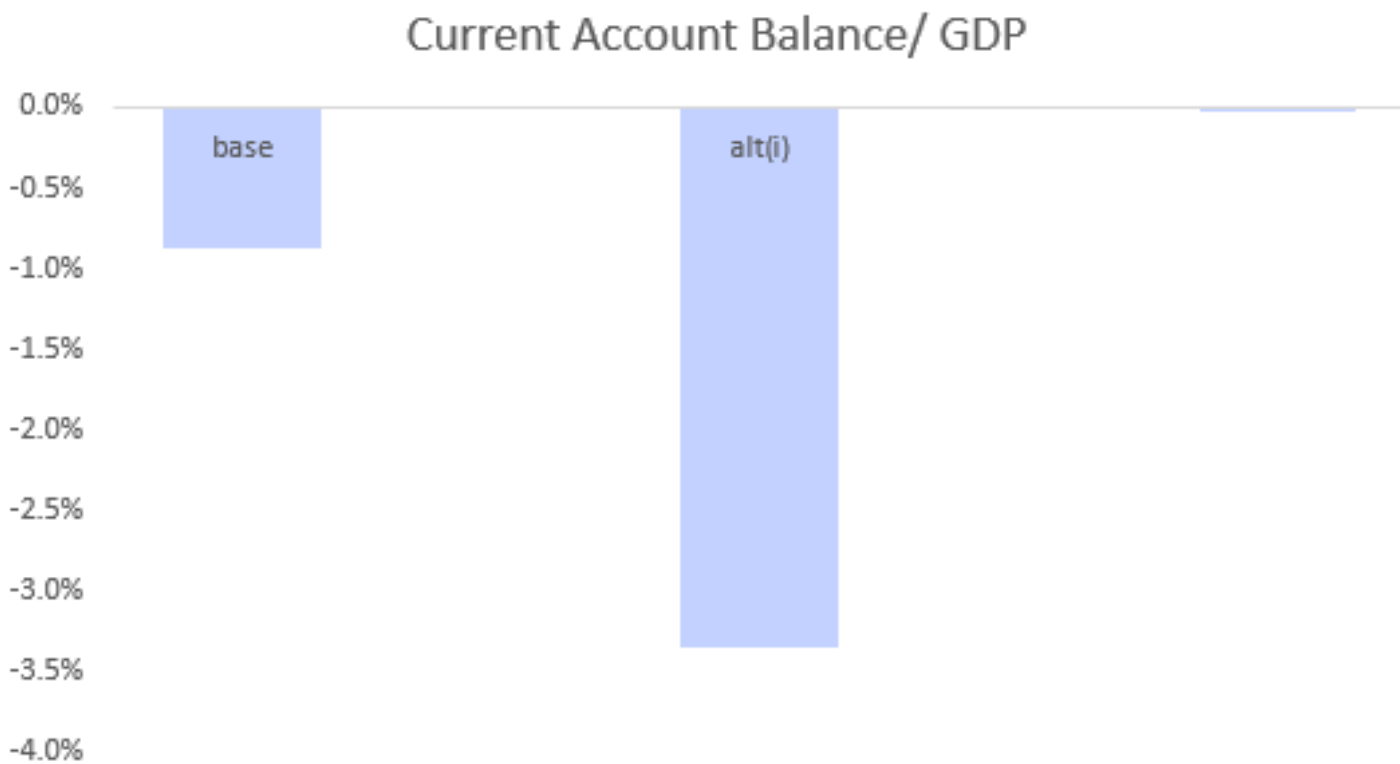




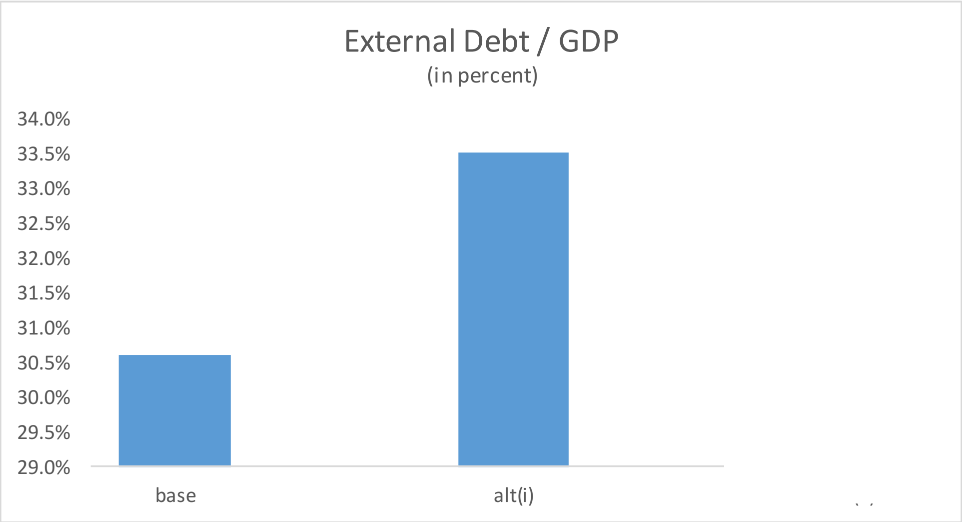
Since output decreases, so do tax revenues.

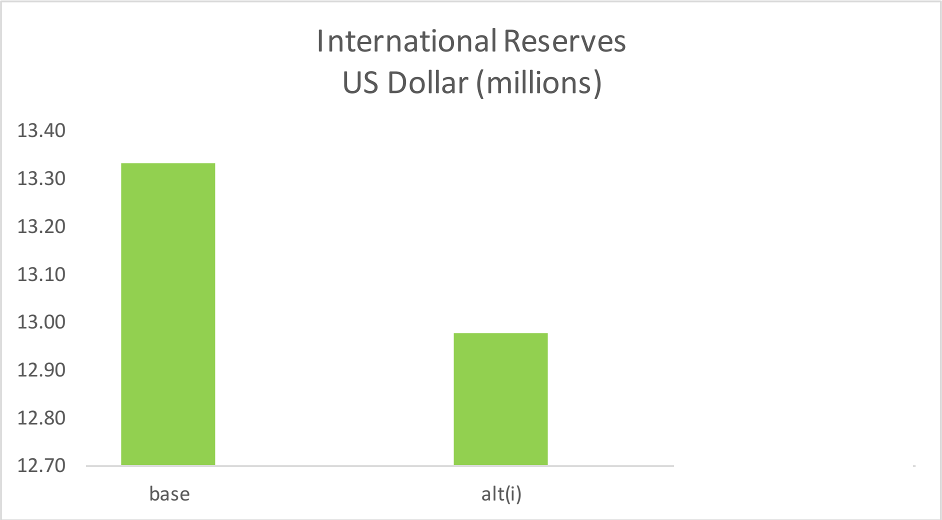
Hence, the overall balance of the public sector worsens.

More government borrowing, along with lower GDP, mean that government debt a ratio to GDP must rise.



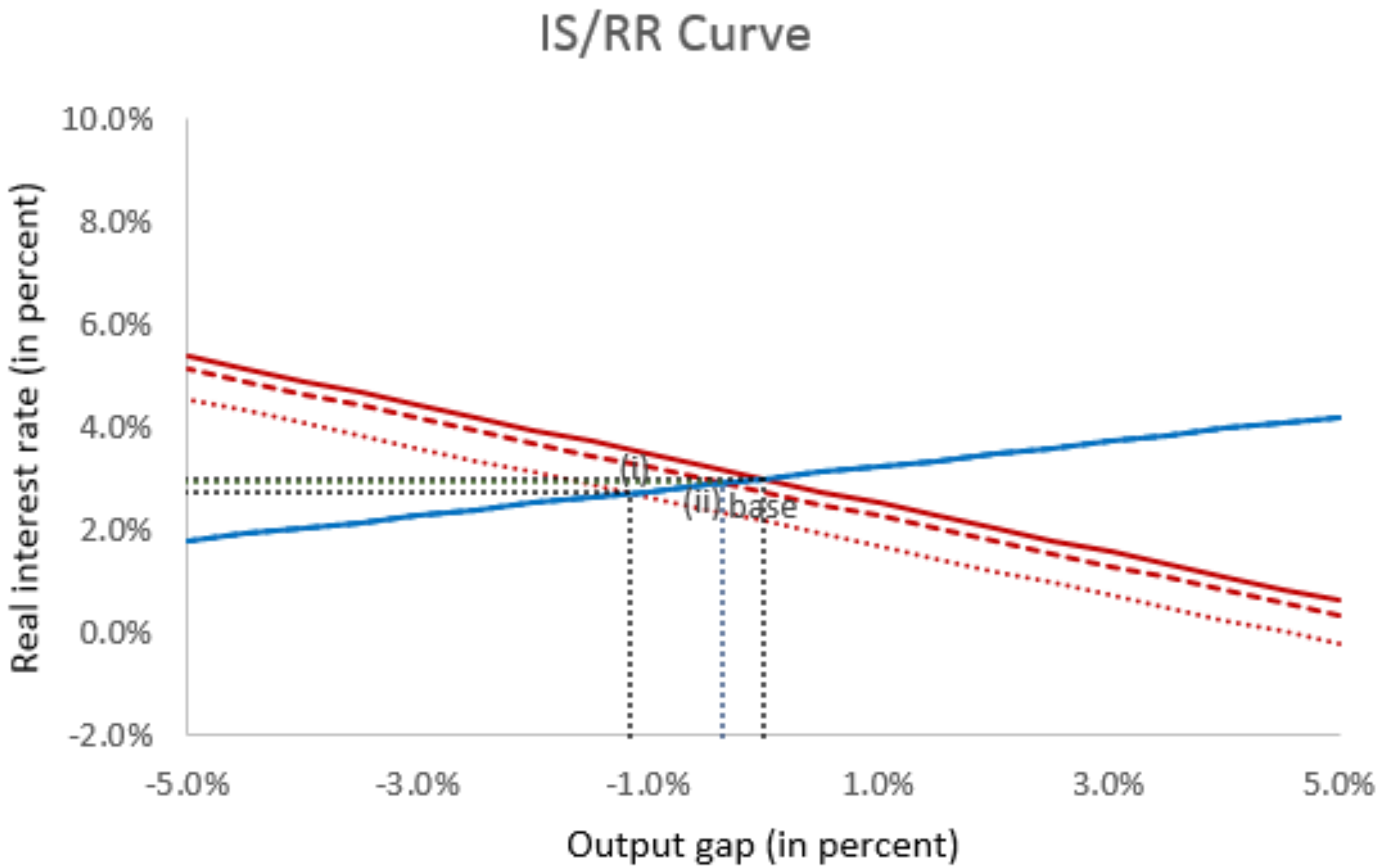
Not only did net exports fall (as we already saw) but so did the more comprehensive measure of the external balance – the current account.





Part of the increase in the current account comes from additional issuance of external debt…

…but the central bank also sold some reserves.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(i)
(ii)
base
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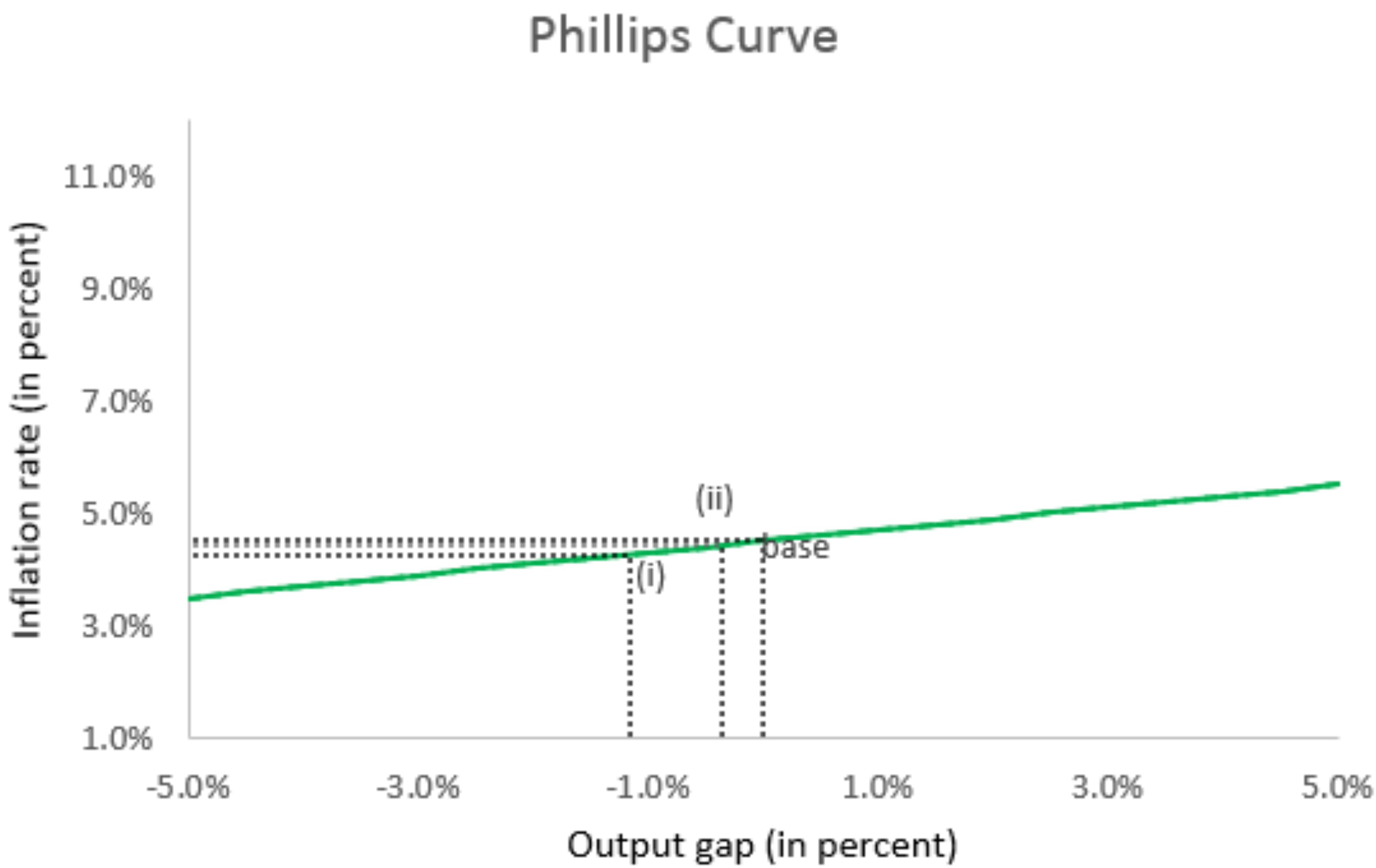
-1.0%
1.0%
3.0%
5.0%
Output gap (in percent)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(ii)
base
(i)
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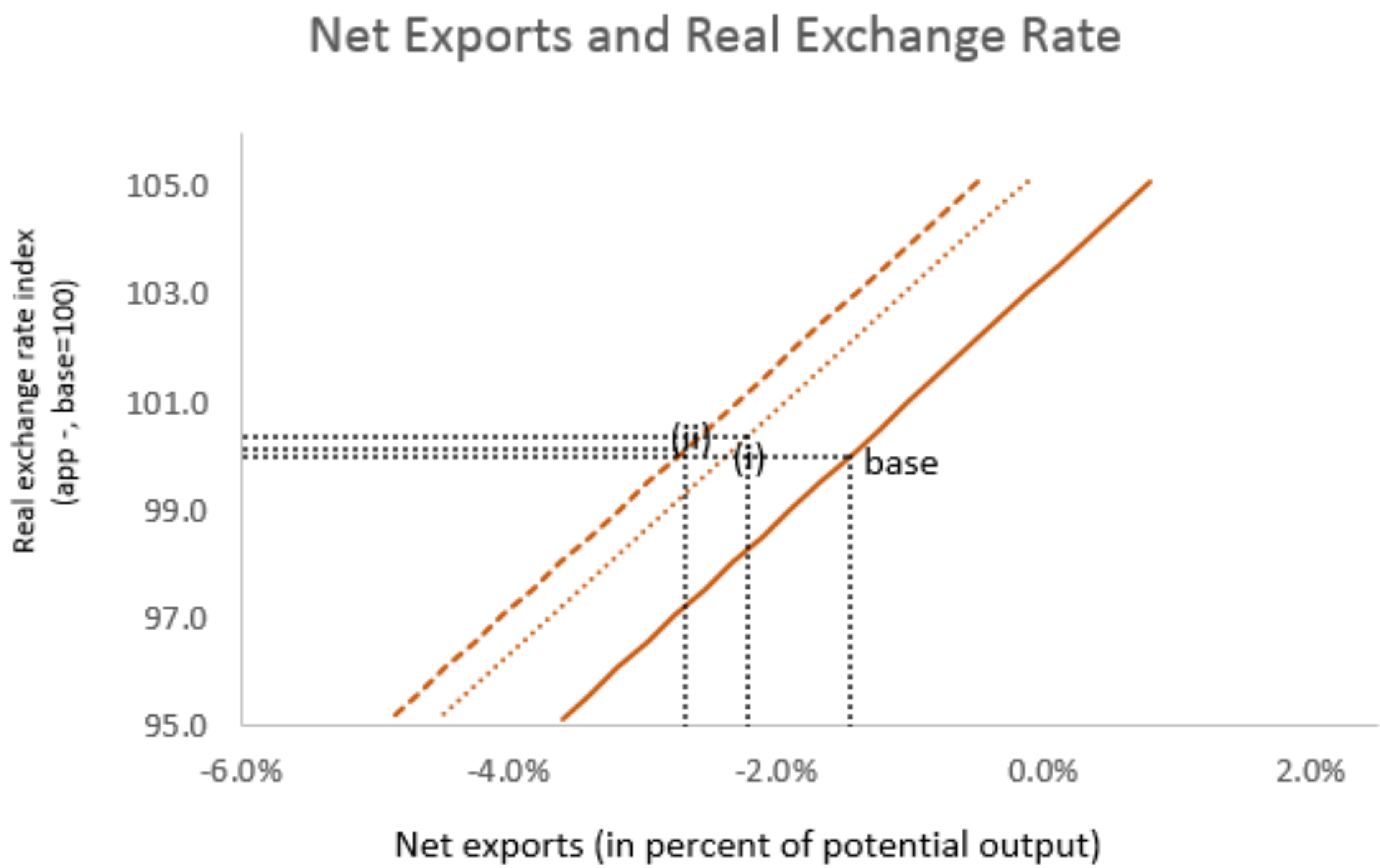
-3.0%
-1.0%
1.0%
3.0%
5.0%
Output gap (in percent)



Net Exports and Real Exchange Rate
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103.0
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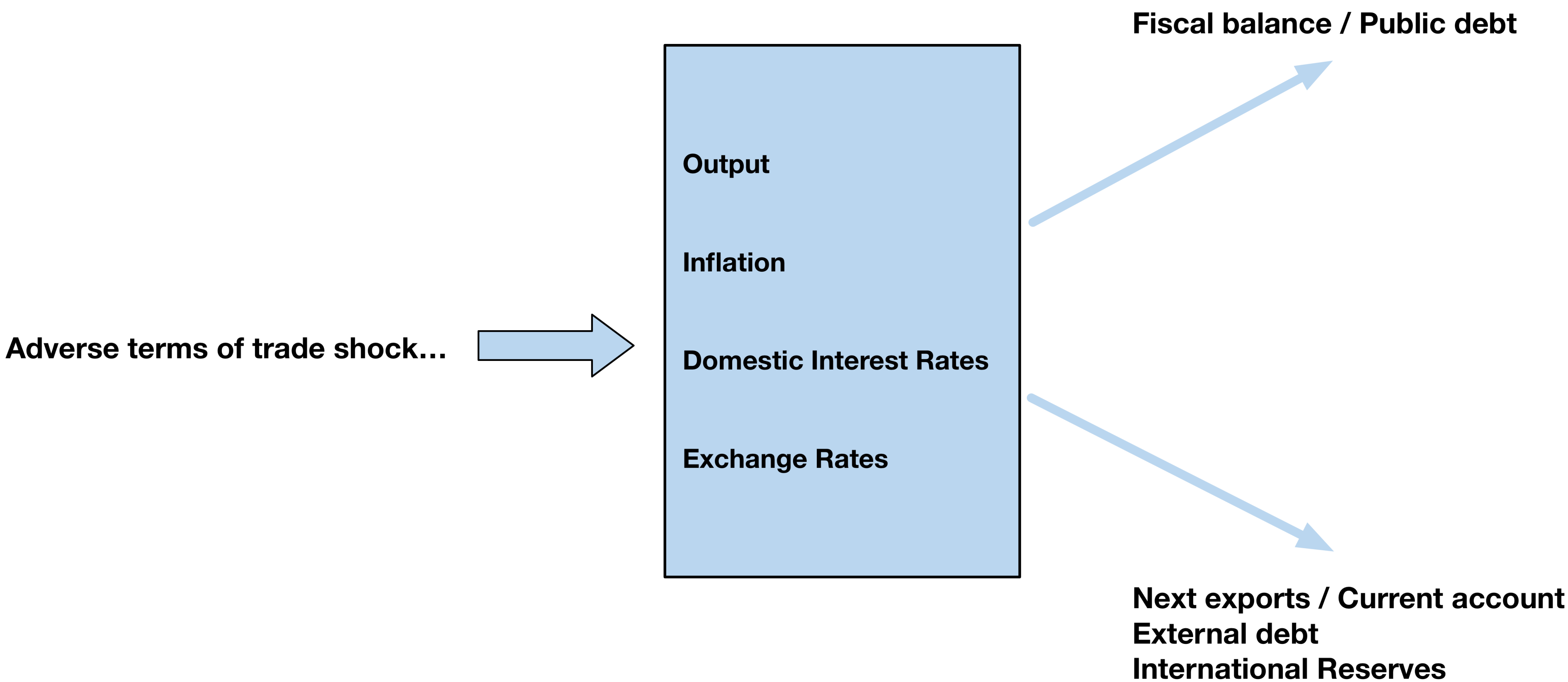
99.0
97.0
95.0
(ii)
(i)
base
-6.0%
-4.0%
-2.0%
0.0%
2.0%
Net exports (in percent of potential output)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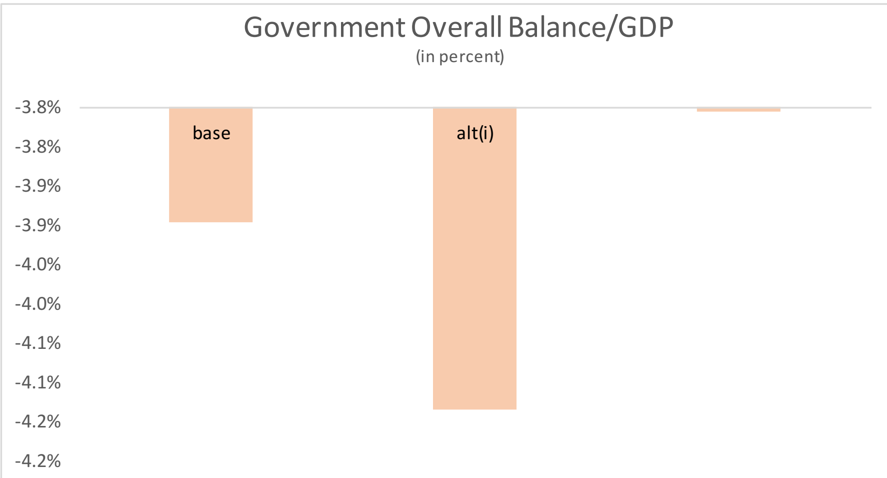
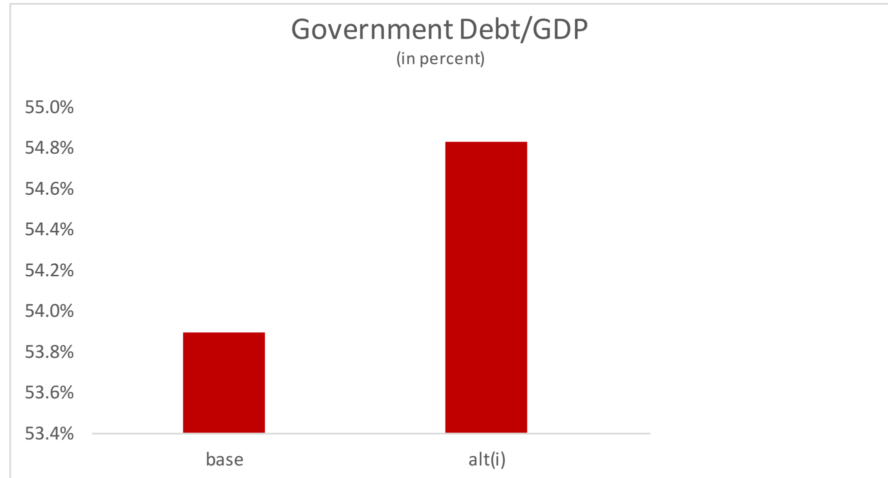
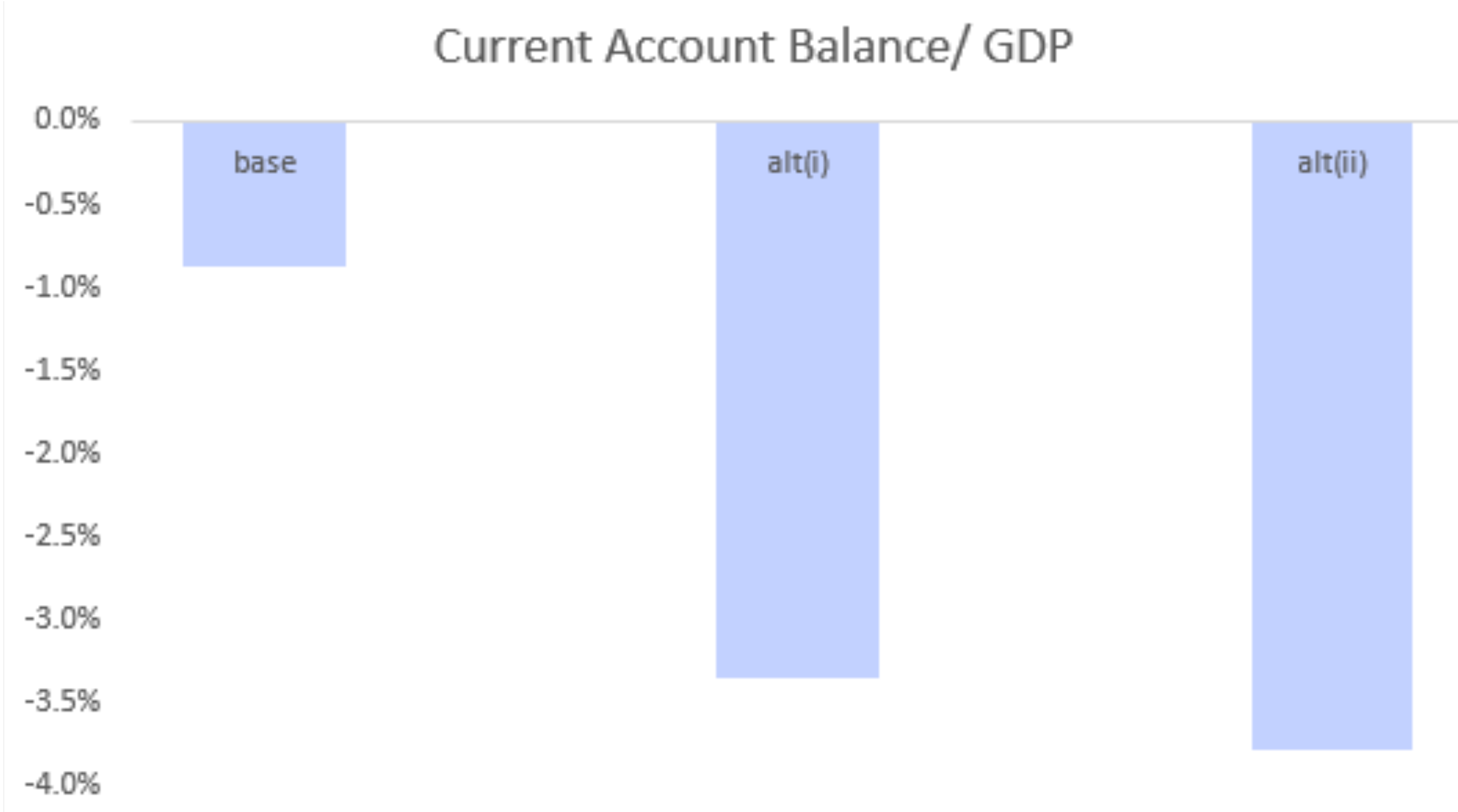
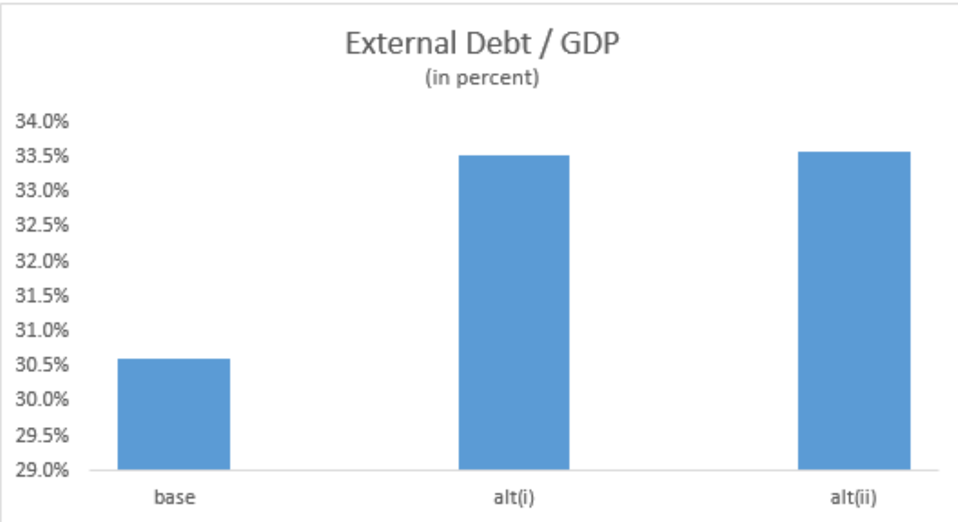




More expenditures mean an even more severe worsening of the public sector balance…

And, even though GDP is higher, since there is even more government borrowing, the government debt ratio has risen further still.


Current Account Balance/ GDP
0.0%
-0.5%
-1.0%
-1.5%
-2.0%
-2.5%
-3.0%
-3.5%
-4.0%
base
alt(i)
alt(ii)



Part of the increase in the current account comes from additional issuance of external debt…

…but quite a bit had to be financed through sales of reserves by the central bank.

Policy Takeaways

- More government spending will likely boost output.
- Before the shock takes place – preserve buffers.
- The increase should be temporary.
- After the shock takes place – you still need to proceed with caution.