1. **Spain.** Spain is one of the victims of the sovereign debt crisis that characterized the Eurozone in the last 18 months. What makes Spain’s case peculiar is that in 2010 the central government’s debt was only approximately 65% of GDP. This statistics is considerably lower than the data for the US or the average for the European Union. Spain’s crisis is mostly the result of excessive private sector’s borrowing.

   (a) The enclosed article entitled “Nightmares for residents trapped in Spanish ghost towns” reminds us that “Up until four years ago, there was barely any difference between how markets treated Germany and Spain. Given that the two countries are part of the same monetary zone, that made sense.” Do you agree that it indeed made sense? After all, the two countries are still in the same monetary zone. Furthermore, four years ago the boom in mortgage lending and real estate prices was in full swing. Please explain what caused yield spreads between German and Spanish Treasury Bonds to increase by as many as 200 basis points (for 10–year securities). (10 points)
(b) According to the article “Nightmares for residents trapped in Spanish ghost towns,” Spain’s government officials resent the acronym PIGS because it likens Spain to other European countries – Italy, Portugal, and Greece – who are notorious for their lax fiscal policy, large government budget deficits, and mounting national debts. Which economic policies, if any, should Spain’s government and/or Central Bank have implemented in order to prevent the current crisis? What side effects would those policies have caused? (10 points)

(c) Several observers project that, should the speculative attacks on its national debt continue, Spain will request a bailout along the lines of other Eurozone countries before it. Some fear, however, that Spain is “too big to save.” That is, the size of the required loan would be too large for the European Financial Stability Facility (the European bailout fund that assisted Greece and Ireland) or its post-2013 successor, known as the European Stability Mechanism. What policy options would be left in such scenario? What would their effects be? (10 points)
(d) Spain is a federation of autonomous regions. The 17 regional governments are in charge of providing many important services to the population. For example, they are in charge of schools and hospitals. According to the enclosed article entitled “Regions to be worried,” in recent years the regional governments have incurred in sizeable budget deficits. In its effort to lower the overall public sector deficit and regain the bond market’s confidence, the central government pledged to limit their ability to borrow. Catalonia’s finance minister, Andreu Mas–Colell, argues that he’s being asked to cut his region’s budget by 20%. What would be the aggregate effects of such a large cut in the government’s purchase of goods and services? (10 points)

2. **QE2.** In a speech delivered at Jacksonville University on November 5, 2010, Federal Reserve Chairman Ben Bernanke argued that the large-scale asset purchase program known as QE2 is not inflationary. Here is an excerpt from his speech: “Well, this fear of inflation is way overstated. One myth that’s out there is we’re printing money. We’re not printing money. The amount of currency in circulation is not changing. The money supply is not changing in any significant way. What we’re doing is lowering interest rates by buying treasury securities. And by lowering interest rates we hope to stimulate the economy to grow faster.”
(a) Carefully describe the impact of the QE2 program on reserve balances, monetary base, and M2. (10 points)

(b) Federal Reserve Bank of Philadelphia President Charles Plosser repeatedly argued that an early end to QE2 may be required to help limit inflation pressures. Under what conditions is Bernanke right to play down the fear of inflations? Under what conditions is Plosser right in arguing the opposite point of view? (10 points)

3. Miscellany.

(a) Assume that the marginal income tax rate for the top bracket is to the right of the peak of the Laffer curve. Who would benefit from a decrease in such tax rate? Who would lose? Why? (10 points)
(b) The Central Bank of Latvia currently lets its currency, the Lat, float within 1% of the central rate of 0.7 per 1 Euro. Latvia’s Net Foreign Assets are roughly \(-26\) billion Euros and the Bank’s foreign reserves are \(5.1\) billion Euros. In 2010, the current account was in surplus for roughly 3.6% of GDP. Preliminary data for January and February 2011 hints that the current account balance should record a surplus for the first quarter of 2011 as well. Several observers noted that the Central Bank’s ability to maintain the floating peg hinges dramatically on the country maintaining a current account surplus in the foreseeable future. Do you agree? Why? (10 points)

(c) At the end of March 2001, one US dollar was worth 2,309.83 Colombian Pesos. Ten years later, the exchange rate was 1,888.0. Compute the average yearly appreciation of the Peso during this period. In March 2001, the CPI indexes were 64.77 for Colombia and 176.1 for the US. In March 2011, the same indexes were 107.12 and 223.47, respectively. What was the average yearly rate of change in the real exchange rate between the two currencies? Was this change to the benefit of US residents traveling to Colombia? (10 points)
(d) At the beginning of 2001, El Salvador abandoned its own currency. The US Dollar became legal tender. What are the costs and benefits of such strategy, often referred to as dollarization? (10 points)
Nightmare for residents trapped in Spanish ghost towns

Half-finished developments languishing amid dust and weeds reveal the scale of a burst property bubble Spain will take years to recover from.

A house under construction in Andratx on the south-west coast of the Spanish island of Mallorca before the financial crisis hit the industry hard. Photograph: Dani Cardona/Reuters

Aditya Chakrabortty

Monday 28 March 2011 16.50 EDT

Sightseers come to Spain for the Alhambra, the Gaudis, the beaches. But Spaniards talk about a new set of landmarks, a kind of tourist anti-attraction. You can find them clustered on the outskirts of big cities and around holiday resorts, in Madrid and Valencia. They are half-completed housing estates, often vast areas of empty flats and foundations and property-developers’ hubris. Now they are nearly deserted. The Spanish call them ciudades fantasma: ghost towns.

Anyone who wants to understand the challenges facing Spain – and by implication the rest of the eurozone – should visit one. Take the route I did, to a place called Valdeluz in Guadalajara. It’s easy enough: board the fancy high-speed train from central Madrid to Barcelona and get off half an hour later. If my experience is anything to go by, only a handful of passengers will spill out on to what is a nearly new station. And there, beyond the bored security guards and the metal railings is ... nothing. Another platform for cheap commuter trains, completed but never used, and then acres of red dust and weeds.

Valdeluz was meant to be a dormitory town, with 9,500 houses for nearly 30,000 residents. But the lead developer hit the rocks a couple of years ago, with only around 1,500 units completed and 700 people moved in.
Joaquín Ormazábal is one of those Valdeluz residents. Forty-four years old and separated from his partner, he bought a three-bed flat in the development four years ago for €240,000 (£211,000). Four years later, it's now worth less than €140,000.

His black Mazda is the only car on the road up to Valdeluz. As we go, he points out the sights we should be seeing but that were never completed.

That side, a parking lot for 2,000 cars (nothing). Over there, a shopping mall (less than a storey completed). A school (with 300 pupils rather than the intended 1,700). Every so often a couple of residents walk by, but the development is so empty they look more like middle-aged squatters.

"We thought the Spanish property market was one giant party, in which prices would always go up and up and up," Ormazábal says. Parking on a hill, we look down at a giant plot of land that is only a quarter built. It's a vast rut from which for the foreseeable future homeowners will not be able to move without losing 40% or 50% of their equity. "Some mornings I feel like such an idiot." As a joke, he mimes sticking a knife into his chest.

And there in a nutshell you have the recent history of the Spanish economy: a giant game of pass-the-parcel in credit and real estate on which the clock was suddenly stopped, and an entire country got caught out. That applies to the government, too: at the start of 2008, even as the great banking disaster loomed, the prime minister, José Luis Rodríguez Zapatero, dismissed nail-biting economists and voice-of-doom rightwingers as "anti-patriotic", and declared that very soon the Spanish economy would leapfrog France.

In some ways, it's a tale that echoes Britain's. Just like the UK, it was not the government that borrowed too much in the good years, but families and businesses. Just like Britain, the social-democratic government asked few questions during the bubble, but just used the artificially high tax revenues to fund a programme of good works and social justice. Now the leftwinger Zapatero is having to push through spending cuts, just as Gordon Brown and Alistair Darling were preparing to do last year. Oh, and policy-makers in both countries like nothing more than to lean back in their chairs and talk airily about a "new growth model" in which the economy is "rebalanced".

Still, two key differences apply. First, the Spanish boom was a lot more straightforward than ours: whereas Britain had rampaging investment bankers and weirdly acronymed toxic assets, Spain had semi-imperialistic property developers often fuelled by loans from cajas, the national equivalent of building societies. In the short term, that could mean that clearing up the aftermath of the bubble is less complicated and eventually cheaper - or so central-bank officials hope. However, set against that is the second big difference: Spain will have to rebuild its broken economy while playing by the rules of the single-currency club.

One of the methods used by the UK to get out of its slump is by engineering a posh version of a peseta crisis. British policy-makers have let the pound fall by around 25% in value against other currencies (we call it "depreciation" rather than the more brutal "devaluation", of course) and have also allowed the economy to down a small shot of
inflation (which reduces the real value of our debts). Locked into the 17-member euro area, with an interest rate set in Frankfurt, the Spanish have no such options.

But that is only the most obvious and general way in which the euro is shaping Spain's future. Talking to officials and politicians, it's clear that Madrid's freedom over setting its own budgets and policies has also been curtailed.

Here are examples: speak to economists, advisers and even ministers in Madrid and two terms will pop up within a few minutes. The first is Pigs - the acronym used by lazy financial traders to refer to Portugal, Italy, Greece and Spain (although nowadays the i is sometimes taken to mean Ireland). "I find it offensive and pejorative and useless," one senior and otherwise softly spoken central banker told me.

It's actually worse than that. Being bracketed with three other countries in southern Europe has helped pull the Spanish into a financial-market conflagration that has lasted the best part of 18 months, and forced the policy-making elite into a series of U-turns and crises. The economy has some huge long-term problems but, even if you squint, the similarities with the other peripheral nations aren't especially close. Unlike Portugal, Spain has enjoyed decades of economic development. Unlike Italy, Spain ran its public finances before the crisis with iron discipline. Unlike Greece, there are no question marks over the official budget figures. "I don't mind the term Pigs," José Manuel Campa, the deputy finance minister, said. "But I think it should be singular - Spain isn't part of any southern European problem."

The other term that constantly pops up is perhaps even more extraordinary. Spanish policymakers talk a lot about "spreads", or the difference between the interest rate financial markets will charge Berlin on government loans, and what they extract from Madrid. "We check the spread every morning, at lunchtime and when the markets close," one of the prime minister's senior advisers told me. I tried very hard to imagine anyone at No 10 confessing to checking the financiers' verdicts on their policies so often; I couldn't.

To be fair, such twitchiness is fairly recent in Madrid too. Up until four years ago, there was barely any difference between how markets treated Germany and Spain. Given that the two countries are part of the same monetary zone, that made sense. Then the credit crunch began and the spread started to grow: almost a percentage point on 10-year government loans at the start of 2009, growing to two percentage points by last July.

The result was to create policy-making pandemonium in Madrid. Just before Christmas of 2009, Zapatero announced a programme of modest, gradual spending cuts; Nobel prize-winning economists Joe Stiglitz and Paul Krugman applauded it at a private meeting in Madrid.

By last spring, as first Greece applied for a bailout and then doubts rose over Ireland, Zapatero was under overwhelming pressure to go in for full austerity. The pressure came from both markets and from the German chancellor, Angela Merkel, and other European leaders. "The message was: if you don't do this, then the whole European project is at jeopardy," is how one senior insider put it.
Eventually, after even Barack Obama phoned Madrid, the Spanish prime minister caved in and ditched a raft of spending pledges that had won him the last election.

The result has been to raze the platform of the governing socialist party to a charred mess. Even Zapatero’s own advisers are not convinced he will retain power next year. When it comes to economics, the government is still in crisis-management mode.

Today, the troubled cajas had to present their plans for fixing their balance sheets to the Bank of Spain. The sharp deficit-reduction programme remains in place.

If there’s one victory government advisers will claim, it’s that the moment of maximum financial danger – the prospect that financiers would refuse to lend to Madrid at any but the most exorbitant rate – has passed. "We have managed to turn market and eurozone perception of a general Spanish crisis into two local problems in the real estate sector and the cajas," I was told. When the Portuguese MPs rejected the government’s austerity plan last week official after official said that the interest rate on Spanish bonds had not gone up. The spread remains around two percentage points: some triumph.

So much for the finance; the economic recovery looks set to be a painfully protracted affair. As part of the eurozone, Spain spent a decade enjoying super-low interest rates – and wasted the benefits on a real estate boom. One in five of the workforce is unemployed and few economists expect that proportion to fall any time soon.

Up on the hill in Valdeluz, Ormazábal tells me that he is the manager of a local bank – one of the ones that has been in the headlines for its history of bad loans. His neighbours have €300,000 mortgages on houses now worth €200,000 – and some of them have lost their jobs.

"Even if they live for a long time, they'll never repay those loans," he said. "They're stuck."

**Madrid fails to get alternative to PIGs off the ground**

At the height of the eurozone crisis last spring, Spain’s prime minister, José Luis Rodríguez Zapatero decided he would try to change market perceptions of his country by countering the traders’ term PIGS. His office asked thinktanks and other organisations to come up with an alternative bloc of which Madrid could be a member.

"The idea was to try and remove Spain from association with Greece and Portugal," said Carlos Mulas, director of the Ideas Foundation and former Zapatero economics adviser. "The ideal term would bracket Spain with Germany or countries in northern Europe."

No one managed to come up with a name that would stick, says Mulas. Instead, government officials made clear to media and investment banks that they saw the acronym Pigs as insulting.

Organisations such as the Financial Times and Barclays Capital began to be very sparing with the word in their publications but it continues to arouse strong dislike among Madrid’s policy-makers. "I don't mind the term PIGS," said José Manuel Campa, the deputy finance
minister. "But I think it should be singular -- Spain isn't part of any southern-European problem."

Spain's public finances
Regions to be worried

Local autonomy makes it harder to cut the budget deficit

Apr 28th 2011 | BARCELONA | From the print edition

THESE are unhappy days in Catalonia. Outside the regional parliament in Barcelona recently stood a picket of noisy secessionists, including a bare-breasted woman with a separatist flag around her neck. A road was blocked by public-health workers fighting cuts. An earlier traffic snarl was caused by demonstrators cutting access roads into the city.

Catalonia has a long separatist tradition, but the anger in Barcelona has more to do with the euro crisis than with an independence movement that won only modest support in a recent informal referendum. Last year Spain teetered on the brink over which Portugal, Greece and Ireland have toppled. It stepped back only by trimming a budget deficit that exceeded 11% of GDP in 2009. The Socialist prime minister, José Luis Rodríguez Zapatero, promises to get it down to 6% this year.

That is hard in decentralised Spain, where 17 regional governments account for 37% of public spending. There is plenty of fat in bloated regional administrations: a study by Mario Garcés for FAES, a right-wing think-tank, finds that their payrolls rose by 42% over the four years to early 2010. Last year Catalonia (which funds 335 public companies, foundations and other public bodies) was one of the most profligate. It overshot its share of the regional deficit target by 2.4 percentage points. Castile La Mancha did worse, producing a 6.5% deficit. Overall the regions' deficits amounted to 2.83% of GDP, out of a national deficit of 9.24%.

This year's regional target set by Madrid is 1.3%. Catalonia's finance boss, Andreu Mas-Colell, says this would require a 20% spending cut. “What country could do that?” he asks. He does not want to administer such a sudden shock to government services, including health, education, policing, the courts and social services. His business-friendly Convergence and Union party of Catalan nationalists favours austerity, but wants more time. So he talks rebellion. “This year we are cutting spending by 10%,” he says.

And therein lies a problem. Catalonia is Spain's second-biggest region, after Andalusia. If it refuses to cut any more, it could add some 0.25% of GDP to Spain's deficit. And what might
jittery bond markets think if other regions were to join a Catalan revolt? The budget head in
Madrid, Carlos Ocaña, insists he can bend wills by refusing permission to take on extra long-
term loans. He squashes talk of a regional rescue fund. “No bail-outs,” he insists.

Almost as worrying is the way Catalonia overshot, with Madrid late in spotting the problem.
Some blamed November's regional election there. The outgoing Socialist-led coalition wanted
neither big cuts nor publicity for their overspend before the poll. Thirteen other Spanish regions
will vote on May 22nd. Are some hiding overspends? There is little hard evidence, but much
suspicion: the government is now imposing quarterly reporting.

Mr Zapatero claims to have imposed austerity without hurting core services. Mr Mas-Colell
disagrees, accusing the Socialists of leaving the dirty work to others and claiming that Madrid is
refusing to hand over funds it owes Catalonia. Mr Ocaña points to the 30% of regional spending
on other fripperies. Angry Catalan doctors complain that health cuts coincide with funding for
a new regional television sports channel. Mr Mas-Colell says a deal with Madrid will emerge, but
it did not happen at a meeting on April 27th, making bond markets jumpier. Will the rumble in
the regions mean that Spain misses its deficit target? No, insists Mr Ocaña. “We met it last year,
and we will again.” Things may become clearer in late May.

From the print edition: Europe