Lyddon Consulting Services Technical Paper on UK national debt and the Scotland Independence Referendum

Why Scotland must keep the pound - and why it can't

SNP afraid of exposing Scotland's credit rating – but it must, and expose the real future for an independent Scotland

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Bob's particular areas of expertise include banking regulation, the sovereign debt crisis, and international money transfer and electronic banking.

Bob has recently consulted for major organizations on the Single Euro Payments Area and Payment Services Directive, and in 2012 he published an authoritative paper on the UK's financial liabilities on the European Investment Bank, the European Central Bank and Eurosystem, and the European Community, quantifying the liability at nearly EUR150 billion. This paper – "The UK's risks and exposure to the European Investment Bank and other European financial mechanisms: amounts, safeguards and breaches in the dyke" – contributed to the UK Treasury including the UK's contingent liability on the European Investment Bank in the national accounts for the first time.

The Treasury continues to deny, however, that the entire support granted by the EU to Ireland and Portugal through the European Financial Stabilisation Mechanism is on the UK's risk as joint&several guarantor of the EU's debts, the assurance having been given to the EU's bonds investors that we are.

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Preface

Can an independent Scotland keep the pound and, if not, what are the alternatives and what do they mean?

These are vital questions for Scotland and also for the remainder of the UK. The SNP Prospectus washes over these questions with an 'airy blandness' that is astonishing, in the context of a highly aggressive position-taking on both these issues and the related one of an independent Scotland's national debt.

The UK government has taken a very low profile on these issues, other than the UK Treasury's Technical Note, written in a manner that disguises what it is really saying: that not only will the current gilts-in-suite all remain on the name of the "continuing UK", but that Scotland will have to take over a slice of national debt and fund it itself – which implicitly means that Scotland will not be raising that money in GBP.

The author, given his extensive experience in banking and finance and the highly relevant matter of European Monetary Union, felt it essential to issue a document to end this phoney war, and lay out in detail, but also in a digestible manner, the considerations and mechanics around an independent Scotland's currency, how it would establish its national debt, and how it would have to manage its debt-to-GDP ratio to incentivise investors to buy that debt and/or, if the debt was in EUR, to abide by the Fiscal Stability Treaty.

That discussion inevitably has to track back to what Scotland's GDP even is, both the oil&gas side and the non-oli&gas, its prospects, the tax revenues it will deliver, and what parts of it are vulnerable to a repatriation of work into England, Wales or Northern Ireland after independence.

Then there is the question of what the national debt will be, and how it will develop, which leads directly to a discussion of whether the central promise of the SNP – that Scotland will flow with milk and honey because it will have a monopoly on oil&gas tax revenues of GBP1,500 per annum per capita – is really new money, when Scotland is already spending GBP1,200 per annum per capita more than the rest of the UK. Doesn't that net off to just GBP300 per annum per capita more?

Further we have several areas of give-up of tax revenues or extra public expenses caused directly by independence which are not even identified in the SNP Prospectus. If those costs are GBP1,000 per annum per capita then +GBP300 becomes –GBP700.

If, on top of that, the extra spending promised by the SNP in their First Budget and First Term as the government of an independent Scotland costs a further GBP1,000 per annum per capita, –GBP700 becomes –GBP1,700. That then adds GBP10 billion per annum to a public debt that – if it is allocated to Scotland on a per capita basis – will start at GBP102 billion or 71% of Scottish GDP.

No wonder the SNP wields the implicit threat to walk away from the UK's national debt, or to try and claim that the debt should be smaller than a per-capita share, or that Scotland could voluntarily decide to forgo claims on unspecified UK assets as an excuse for not taking on debt if Scotland were not allowed to keep the pound.

The SNP Prospectus contains very few hard numbers and that is deliberate. So is the lack of detail about how the national debt and the financial market infrastructure would be established. The SNP's inference is that any national debt could simply be conveyed onto the name of Scotland without a change in its terms and without consulting the investor: this is untrue.

Underlying the SNP's stance is the first piece of intelligence that the SNP wishes to keep secret: that Scotland would have to issue its own debt in its own name on the first day of independence, and to do that it would need its own credit rating.

Then all the issues addressed in this paper where the author has had to derive numbers off the back of the few reliable available numbers would be thoroughly investigated by Standard & Poors and their professional colleagues, and an independent and authoritative judgment promulgated.

The second piece of intelligence that the SNP wishes to keep secret is that Scotland cannot have its cake and eat it:

1. keep the pound
2. keep monopoly control of the oil&gas reserves
3. keep all the oil&gas tax revenues
4. have a shareholding in the Bank of England
5. link their national debt slice to the UK's historical oil&gas tax revenues but not to the extra GBP1,200 per annum capita extra public spending made in Scotland by the UK over the same period
6. get a share of "UK national assets", whatever they mean by that and they do not say: Bruce Forsyth?
7. Slide into the EU without re-applying, on the basis of a tenuous "continuity of effect" argument
8. Break the "continuity of effect" crassly through their immigration and university tuition fees policies
9. Remain outside the EUR even if Scotland is in the EU
10. Not then have to abide by the EUR Member State Fiscal Stability Treaty
11. Not risk launching their own currency which, as a minor currency, would entice a narrow international investor base and whose attraction would have to be bolstered via higher interest rates and similar fiscal measures as are dictated by the EUR Member State Fiscal Stability Treaty

The SNP's inferred method of taking over a share of national debt, in the context of achieving (1), avoids the need to get its own credit rating. In turn that enables the obfuscation and avoidance of the line of discussion that the SNP wishes to keep the lid on:

- What would Scotland's debt-to-GDP be now, in 2016 and afterwards if it had its own currency?
- What would Scotland's debt-to-GDP have to be by 2030 if it joined the EUR and had to abide by the Fiscal Stability Treaty?
- What rises in taxation and cuts in spending would have to be made to:
  - Defend an independent currency?
  - Hit the targets dictated in the Fiscal Stability Treaty?

The answer, in the author's view, is that the measures needed to defend an independent Scottish currency would be the same as are required by the Fiscal Stability Treaty. After all, the measures in the Fiscal Stability Treaty have been devised to strengthen the credibility of the EUR so why should there be different measures to defend an independent currency?

Furthermore the author believes that Scotland would only be allowed to remain a member of the EU if it undertakes to adopt the EUR, meaning that:

- It would have to have an independent currency first, because it could not switch directly from GBP to EUR
- Its own currency would be put into the ERM upon its launch
- It would be managed to achieve convergence with the EUR – meaning towards compliance with Fiscal Stability Treaty
- It would then be redenominated into the EUR at an irrevocably fixed exchange rate

That path is the most likely path for an independent Scotland, and it totally contradicts the SNP vision: public expenditure would have to be cut as from independence.

The SNP 'have our cake and eat it' version is implausible and will not be acceptable to The Rump. It can only be viewed as a red herring designed to distract the voters and lull them into a false sense of security.

That may be the SNP campaigning strategy, but it is in the interests of all UK citizens that it this should all be on the table, hence the production of this paper.

Bob Lyddon

Thames Ditton

January 16th 2014

Glossary

Term	Meaning
UK	England, Scotland, Northern Ireland and Wales, the nation state existing prior to Scottish independence
Day Zero	The first day of operation of an independent Scotland, assumed for arithmetical purposes in this study to be 1st January 2016
Scotland	the independent nation state existing after 1st January 2016, and the shadow nation state existing within the UK before then
The Rump	England, Northern Ireland and Wales, the nation state existing after Scottish independence which is not, as the UK Treasury described it, the "continuing UK"
Sovereign Risk	The credit risk of a government – the best and lowest credit risk available in the country concerned. Thought to be synonymous with being credit risk-free, up until the Latin American 'foreign currency debt' defaults of the 1980s. After that the definition was amended from "any debt obligation of a sovereign government" to "an obligation of a government in its own currency", such as gilts in the UK or Treasuries in the US: foreign currency obligations were not considered as risk-free but domestic currency obligations were. This definition has been undermined by the EUR, where several countries use a currency but none has the control over the tools for its management commensurate with its obligations being regarded as risk-free; to be genuinely credit risk-free an obligation of a government must be in its own currency **of which it is the sole user**. The existence of multiple users of a currency damages the quality of the central bank money in that currency and reduces the quality of the respective government's Sovereign Risk
TARGET	Trans-European Automated Real-Time Gross Settlement Express Transfer System, the system established amongst the EU central banks for the transfer and settlement of very large transfers in Euro: it came into operation on 1.1.1999
Central bank money	Forms of money that are regarded as free of credit risk by the central bank of a particular country, being money that represents the sovereign risk of that country. In the UK the forms would be: • A credit balance on an account at the Bank of England (which can only be in GBP) • GBP note and coin issued by the Bank of England • UK gilts The different forms of central bank money must be 'fully fungible': instantly exchangeable for one of the other forms at par
EEA	European Economic Area, taken to mean the additional countries that normally adopt EU Regulations and Directives into their national law without their being directly subject to them by dint of direct EU membership. The countries are Iceland, Norway, Liechtenstein and Switzerland, although the formal status of Switzerland can be greyer than that of the others

Term	Meaning
Basis point	One hundredth of one percent, also written as 0.0001 or 0.01%. Basis points per annum is written in shorthand as "b.p. p.a.". Bank loan pricing is normally expressed in basis points per annum over an interbank rate cost-of-funds. Yields on bonds are expressed as basis points per annum over a benchmark, for example 30 basis points per annum over US Treasury bonds. If, then, the yield on US Treasury bonds is 2.76%, the yield on the other bond would be 2.76% + 0.30% = 3.06%. This could also be expressed as "T+30"
Redenomination	The operation to change the currency of the financial assets and liabilities of a country and all counterparties in it, without any change in the counterparties, the governing law and the place of exclusive jurisdiction. It was recently performed to adopt the EUR. All bank accounts, loans and securities have their currency altered at the irrevocably fixed exchange rate
Rating agency	An organisation that gives estimates of the likelihood that an investor will not get principal and interest paid to them on a security in accordance with its terms. The most influential are Standard & Poor (S&P) and Moodys, followed by Fitch. The rating is composed of capital letters and a '-' or '+'. Short term ratings on securities below one year may have a rating such as A1+/P1: A1+ is S&P's highest short-term rating; P1 is Moodys' highest. In the S&P system long-term ratings would range from AAA down to a point where a security would no longer be regarded as 'investment grade', and then down to 'junk'
Country risk	Also known as 'Political Risk' and 'Transfer Risk', and is the risk that a financial asset held in a country or a claim on a cashflow due from within a country could be expropriated completely, become subject to a tax that cannot be reclaimed or offset, or where the asset can no longer be sold.. or the proceeds remitted, perhaps with a delay, or a discount, or at any exchange rate far below the one that was counted upon. Another risk would be the imposition of large charges on payments out of the country, bureaucratic requirements and reporting. It is a key risk of doing business abroad, such as a pensioner after Scottish independence having their private pension fund with a Scottish insurance company
Investment grade	An investment rated by S&P at BBB- long-term or better, and at or better than the equivalent ratings of other agencies; if a security is downgraded to below that point many investors are not allowed to hold it and they must sell it ('dumping'). The same investor would not be permitted to invest in a new security rated below investment grade Bonds rated between BB+ and B- long-term, in the S&P system, are neither Investment Grade nor Junk
Junk	An investment rated by S&P at lower than B- long-term, and lower than the equivalent ratings of other agencies: this means anything rated by S&P long-term at CCC+ or lower

Term	Meaning
ERM	The European Exchange Rate Mechanism, a system introduced by the European Community in March 1979, as part of the European Monetary System (EMS), to reduce exchange rate variability and achieve monetary stability in Europe, in preparation for Economic and Monetary Union and the introduction of a single currency, the euro, which took place on 1 January 1999. After the adoption of the euro, it mutated into ERM II, a policy charged with linking currencies of countries outside the Eurozone to the euro (having the common currency as a central point). The goal is to improve the stability of those currencies, as well as to gain an evaluation mechanism for potential Eurozone members. The last currency to move out of it was the Latvia Lat (ISO code LVL). Latvia had a fixed exchange rate system arrangement whose anchor switched from the SDR to the EUR on 1 January 2005, and then it joined the ERM on 2 May 2005. It adopted the EUR on 1.1.2014 at an irrevocably fixed exchange rate of 0.702804. Prior to that it was the Estonia crown or Kroon (ISO code EEK) which joined the EUR on 1.1.2011 at an irrevocably fixed exchange rate of 15.6466. The currencies still in the ERM are the Danish kroner (DKK) whose central valuation against the EUR is EUR1 = DKK7.46038 and the Lithuanian litas (LTL) whose central valuation against the EUR is EUR1 = LIT3.4528
ISIN	International Securities Identification Number, it uniquely identifies a security. Its structure is defined in ISO 6166. Securities for which ISINs are issued include bonds, commercial paper, stocks and warrants. The ISIN code is a 12-character alpha-numerical code that does not contain information characterizing financial instruments but serves for uniform identification of a security at trading and settlement.
Eurosystem	The European System of Central Banks, consisting of the European Central Bank and the National Central Banks of each EUR country. In aggregate it is the system set up under the Maastricht Treaty to do the central banking for the EUR, to run TARGET and to issue and deal with central bank money in EUR, including allowing commercial banks to place securities as collateral for loans as long as the securities conform to the criteria of the ‘A’ and ‘B’ Lists, represent sovereign risk and are therefore seen as central bank money in EUR (Author’s note: ‘seen as’ is an important phrase. No bonds in EUR have the same quality as central bank money equivalent to UK government bonds in GBP, simply because the UK is the sole user GBP and the Bank of England is the only issuer of central bank money in GBP)

Term	Meaning
‘A’ List	A central list of securities that are eligible as collateral for loans at every member of the Eurosystem (Bundesbank, Banca d’Espana, Nationale Bank van Belgie etc..). These securities would include ones of issuers such as The European Community, European Investment, Koninkrijk Belgie, Koninkrijk Nederland, Republique de France…
‘B’ List	A list of securities that are eligible as collateral for loans only at the member of the Eurosystem that issued the list: each member has one. That of the Banque de France would include SNCF, France Telecom, other state agencies, but also unused French postage stamps and unused Paris metro tickets
RTGS	Real-Time Gross Settlement payment system, normally used for large-value payments, and run by the central bank for the currency – it is CHAPS in the UK, whereas for the EUR there is TARGET. The system must be free of credit risk on the sending bank and the remitting customer, such that a sending bank requesting a payment to be made must have sufficient ‘central bank money’ available on its account at the central bank, before the central bank will debit its account and transfer the value to the receiving bank for credit to the beneficiary. That central bank money is normally in the form of a credit balance or, if there is insufficient balance or even an overdraft, a portfolio of eligible securitie, ‘A’ List or ‘B’ List. If the sending bank has note&coin to pay in, they will be credited straightaway to the bank’s account and reduce the overdraft/increase the credit balance
Fiscal Stability Treaty	The Treaty on Stability, Co-ordination and Governance in the EMU, aka the Fiscal Stability Treaty, signed amongst the EU Member States that are part of the Single Currency – the EUR – to agree to reduce the ratio of government debt to GDP to 60% by 2030, and to make such adjustments as are needed to spending to take account of additional age-related social costs that may arise up to 2050 i.e. to adjust welfare spending downwards before 2030 so that the 60% ratio can be sustained up until 2050
Reserve currency	A reserve currency (or anchor currency) is a currency that is held in significant quantities by governments and institutions as part of their foreign exchange reserves, and that is commonly used in international transactions. To be such a currency it must be convertible and freely tradable in large amounts, and normally fulfill other criteria such as having a large domestic economy behind it, with a separation of the executive and the judiciary, and a developed legal system. USD is the main reserve currency, followed by the EUR. In the second rank come GBP, JPY and CHF.

ISO Currency Codes

Code	Meaning
ESL	the ”livre ecossais” or independent Scottish pound that could be brought into existence on 1.1.2016. The author has chosen an ISO currency code whose first two digits must be a unique combination. SCn is not available thanks to the Seychelles. ESn was vacated by ESP joining the EUR. nnL is used for pound instead of nnP, following the example of the Turkish lira. This is so as to avoid 'ESP' and the inference that divining Scotland's economic prospects as an independent nation has any crossover with Extra-Sensory Perception)
ECU	The European Currency Unit, the basket currency of EU Member State currencies, which redenominated to the euro at a rate of 1:1 on 1/1/1999
EUR	The euro, which came into existence on 1/1/1999
GBP	The UK pound up to 1.1.2016, and then The Rump pound
USD	The US dollar
CZK	The Czech crown or koruna, which has been the currency of the Czech Republic since 8 February 1993 when, together with its Slovak counterpart, it replaced the Czechoslovak koruna at par.
SKK	The Slovakian crown or koruna, the currency of Slovakia between 8 February 1993 (dissolution of Czechoslovakia) and 31 December 2008. On 8 February 1993 the SKK replaced the Czechoslovak crown at par or 1:1. Slovakia switched its currency from the koruna to the euro on 1 January 2009, at the irrevocably fixed exchange rate of 30.1260 SKK to the euro
GRD	The Greek drachma that converted to the EUR at the irrevocably fixed exchange rate of 340.75 at the end of 2001
AED	United Arab Emirates dirham
NOK	Norwegian kroner
XDR	International Monetary Fund's Special Drawing Rights or SDRs, a supplementary foreign exchange reserve asset defined and maintained by the International Monetary Fund (IMF). The value of a SDR is defined by a weighted currency basket of four major currencies: the US dollar, the euro, the British pound, and the Japanese yen. However it is not a currency as such. Instead an SDR represents a claim to currency held by IMF member countries for which they may be exchanged
DKK	Danish kroner
EEK	Estonian kroon
LVL	Latvian lat
LTL	Lithuanian litas
JPY	Japanese yen
CHF	Swiss franc

Sources

Institute for Fiscal Studies: “Scottish Independence: the fiscal context. IFS briefing note BN135”

Summary and full versions of the SNP Prospectus for independence:

- “Scotland’s Future: Your Guide to an Independent Scotland – A Summary”
- “Scotland’s Future: Your Guide to an Independent Scotland”

Andrew Marr: “A History of Modern Britain”, pages 436, 437, 444 and 512

UK Treasury Technical Note issued on 13.1.14: UK debt and the Scotland independence referendum

Executive Summary

The SNP's prospectus for an independent Scotland declared that Scotland will keep the pound since it is an asset shared with the UK, in exchange for which it would be willing to take on a share of the UK national debt. This is a bold statement, backed by a clever but disingenuous argument masking that the SNP have very carefully considered all the scenarios of the currency of an independent Scotland and the way in which it would establish its own national debt – all are daunting.

The scenario implied in the prospectus is the most advantageous for Scotland, but it is not possible. The SNP confirmed this implication in its response to the UK Treasury's Technical Note 'UK debt and the Scotland independence referendum' issued on 13.1.14 by saying that it backed their position: it did nothing of the kind. It stated that Scotland would have to take over its share of the national debt by issuing its own bonds and paying the proceeds to The Rump on Day Zero – but it did not say in which currency Scotland would issue those bonds, inferring it would not be in GBP.

The SNP response can be interpreted as a deliberate distraction from that scenario and the other possible scenarios, an examination of which exposes exactly what the SNP wishes to mask: that Scotland would have to obtain its own credit rating – so what would it be?

That in turn depends on what its debt and GDP would be on Day Zero, its then current spending and its future spending plans, its currency reserves, its natural reserves, and the strength of its financial system – and the sources and strength of economic growth.

Contending that Scotland can keep the pound might, in the SNP's view, deflect attention from these questions, but it cannot. Likewise the SNP might hope that certain arrangements binding Scotland's finances to those of the rest of the UK can outlast independence, but they cannot: The Rump must regard Scotland as a foreign country after independence and isolate itself from Scottish risk in order to comply with its own governance rules and to follow its own interests.

Even if Scotland were to keep GBP as its working currency and its national debt in GBP, this degree of separation exposes almost all of the same issues as having its own currency, or even USD or a synthetic currency, much as the SNP might wish this were not the case.

However, all of those options are better for the SNP than the most likely scenario: if Scotland wishes to remain in or seamlessly re-join the EU, the price would be joining the EUR. Then Scotland would have to commit to the Fiscal Stability Treaty and reduce its debt-to-GDP to 60% by 2030, or possibly even lower.

The route to that would be to launch its own currency but have it immediately join the ERM and be managed on a convergence path towards the EUR.

This would guarantee Scotland a sustainable low cost of debt servicing, and enable Scotland to avoid the perils of launching its own currency for the long term, or the dangerous anomalies of using a foreign currency – GBP or USD or a synthetic – as its own.

But cutting debt-to-GDP to 60% would be poison to the SNP spending prospectus. As a result the SNP has disingenuously claimed there is a chance of retaining the pound in a kind of status quo mode, an option which they must know does not exist.

SECTION 1

Scotland on Day Zero: SNP claims and intended bargaining position

- The SNP sets out many claims for Scotland's position as being absolute and inviolable, but they are neither
- An independent Scotland must take over a share of UK national debt: right now it is responsible for all of it
- A 'Yes' vote in the referendum is not an Enabling Act for the SNP Prospectus: others have a right to asset their interests

Upon independence Scotland would find its place around 117 in the world based on population of 5.3 million out of the UK's 63.2 million. That would rank it amongst Slovakia, Singapore, Turkmenistan and Norway.

This is not sitting "at the top table" as the SNP puts it in its Prospectus. Scotland would cease to have any voice as a permanent member of the UN Security Council – the ultimate top table – not least because it would have ceased to be a nuclear power.

A small country has to have very special circumstances to obtain a Standard & Poors AAA-rating, the one the UK has got and has recently had confirmed. Both Norway and Singapore would be templates for the SNP to emulate. Although the UK was downgraded by Fitch and Moodys its credit default swap price ("CDS") is at a AAA-level in December 2013, confirming the market's perception is the same as Standard & Poors' and disagreeing with Moodys and Fitch.

The description that the SNP has puts in its Prospectus of the Scottish economy on p84 "Scotland in numbers" is advertising not hard facts. On p87 the SNP refers to the statement in the First Report of the Fiscal Commission that "Scotland is a wealthy and productive country". Where is the backing for these statements?

The SNP Prospectus lacks vital detail that voters ought to be given, in a dispassionate manner, in order to make so important a decision. Instead we have paragraphs that give off 'airy blandness'.

Andrew Marr, on p512 of his "A History of Modern Britain", refers to New Labour's 1997 General Election manifesto as majoring on 'airy blandness', as per Tony Blair's introduction:

I believe in Britain. It is a great country with a great history. The British people are a great people. But I believe that Britain can and must be better: better schools, better hospitals, better ways of tackling crime, of building a modern welfare state, of equipping ourselves for a new world economy. I want a Britain that is one nation, with shared values and purpose, where merit comes before privilege, run for the many not the few, strong and sure of itself at home and abroad. I want a Britain that does not shuffle into the new millennium afraid of the future, but strides into it with confidence."

Compare and contrast with the preface to the SNP prospectus:

"Scotland is an ancient nation, renowned for the ingenuity and creativity of our people, the breathtaking beauty of our land and the brilliance of our scholars. Our national story has been shaped down the generations by values of compassion, equality, an unrivalled commitment to the empowerment of education, and a passion and curiosity for invention that has helped to shape the world around us. Scots have been at the forefront of the great moral, political and economic debates of our times as humanity has searched for progress in the modern age.. I believe in independence because I believe it will be better for all of us.. I also believe that the bonds of family, friendship, history and culture.. etc etc"

This last sentence is interesting because it is disingenuous: the way the SNP sets out is stall, from a negotiating point of view, is passive-aggressive, an extreme version of "What's ours is ours and what's yours is negotiable". There is no chance of the separation and ongoing relationship with the rest of the current UK being friendly if the SNP adopts such a one-sided, indeed grotesquely selfish, opening bargaining position.

This paper unravels both how that tactic is used, its invalidity, and its myopia: the economic narrative of the Prospectus promises only upside, and totally ignores all downside.

This paper centres on the Scottish national debt issue, and it is the paper's contention that the SNP Prospectus deliberately makes its claims about continuing usage of the pound in order to mask the real issue of what Scotland's rating would be on its own. Standard&Poor would issue that rating dispassionately and independently: the SNP Prospectus, by contrast, is very big on passion and self-certification.

The central passive-aggressive point the SNP has made about the UK national debt is that the UK is the issuer of the debt, so if Scotland becomes separate and the UK still survives, then it is Scotland's choice as to whether to take any debt or not. This is a fallacy but one the UK Treasury decided not to nail: the UK will not survive Scottish independence because Scotland is the other kingdom that England is united with in the UK. Scottish independence means that the UK's current gilts become the obligation of a different borrower, indeed of two different borrowers, and neither can step away because, within the UK, they are joint&several guarantors of the debt.

There was thus a curious undertone during the launch of the SNP Prospectus – repeated in the SNP's response to the UK Treasury Technical Note - that an independent Scotland might not take on any of the UK's national debt if Scotland was not allowed to keep the pound.

This was a heavily veiled, implicit threat, and needed to be heavily veiled to have force, since, unveiled, it is very empty, a complete bluff. No UK government would sign a release treaty allowing Scotland to walk away from the UK debt-free but have a monopoly over the UK's oil&gas revenues.

Scotland, which is currently jointly and severally liable for the UK national debt along with the rest of the UK because it is constitutionally a part of the UK, could achieve this only by unilaterally splitting off from the UK.

Scotland would then not only find itself outside the UK, but also outside the EU, the EEA, NATO, the United Nations, the Commonwealth and so on. For that please read a Rhodesian-style UDI – Unilateral Declaration of Independence.

It is a measure of the SNP's desperation to distract attention from their actual bargaining position and options that they should seek to infer the existence of such a very powerful weapon tucked into their waistband. Unfortunately the only real threat is that the weapon will go off while it is firmly tucked into their waistband.

The threat rests additionally on a flawed legal premise that the UK government has done little so far to dispel, namely that the expression by the Scottish people of a 'Yes' vote has a legal connection with the contents of the SNP Prospectus. It does not. The question on the paper is "Should Scotland be an independent country?" A 'Yes' vote is not an Enabling Act for the SNP Prospectus, conferring Emergency Powers.

Secondly, and this is not a new argument, a vote by the Scottish people, however democratically reached by the Scottish electorate, lays no obligation on other countries to obey. A failure to obey does not then confer carte blanche on the Scottish government to act as it pleases and construe its actions as legal, valid and binding on other countries.

The contract of separation has to be a proper bargain, as struck between willing buyers and sellers, and many parties are involved. They all have the right to represent their own interests and a vote of 'Yes Scotland should be an independent country' does not oblige those parties to accept contract terms unilaterally dictated by the SNP.

SECTION 2

What are Country Risk, Sovereign Risk, central bank money and Redenomination?

- After independence Scotland will be a foreign country as far as The Rump is concerned, and dealings with Scotland will involve Country Risk
- The Scottish government will be the Sovereign Risk borrower for Scotland, with its own currency and central bank money – which is risk-free to investors in it, if the currency is one that Scotland alone uses
- Redenomination cannot be used either as a method of splitting off Scottish national debt in GBP from that of The Rump – because the surviving debtors are not the same as the original debtor – the UK
- Nor can redenomination be used to switch GBP assets and liabilities into a new Scottish currency – because the GBP will still exist, and because (in Scotland's hopes) both The Rump and Scotland will still be in the EU
- Sharing the GBP would debase the GBP as far as The Rump is concerned because The Rump's central bank money would have its quality compromised as representing genuine Sovereign Risk: The Rump would not be the sole user of GBP, a fault line in the central bank money in the EUR that has been exposed by the EUR sovereign debt crisis

While there are definitions of the terms Sovereign Risk, Country Risk, central bank money and redenomination in the Glossary, it is important at this stage to link them specifically to the topic in hand.

The UK Treasury's Technical Note "UK debt and the Scotland independence referendum" refers to the UK after Scottish independence as "the continuing UK". This is a flaw. There would be no UK any longer. Scotland would be a fully independent sovereign state. The Rump and Scotland would be foreign countries as far as the other was concerned.

This has many implications and risks, and they need to be squarely addressed, because they will characterize the relationship between Scotland and The Rump, and Scotland and other countries. Scotland will have to create its own financial markets infrastructure in order to operate as an independent country.

Let's start with Country Risk. The Rump and Scotland would be foreign countries as far as the other was concerned. This means that dealings with one another entail Country Risk, also known as 'Political Risk' and 'Transfer Risk'.

Under that heading go all the risks of a loss of value of an asset owned in that country, or of a cashflow expected from it. The reasons come down to foreign government action. The likelihood of a government taking such action of its own volition – or because economic circumstances compel it – is part of the evaluation by a credit rating agency.

A AAA-rating implies an extremely low likelihood of government policy being to restrict the free flow of money, and a very low likelihood of the government being compelled to restrict it:

- Venezuelan government policy tends towards penalising foreign investors
- Argentinian government policy is driven by seasonal shortages of USD with which to pay for vital imports
- Both countries have low credit ratings because of the high Country Risk

The action by the foreign government could be complete expropriation of an asset or a claim, or making it subject to a local tax that cannot be reclaimed or offset. There could be a ban on sales of assets, or else blocks/delays on the remittance of the proceeds of a sale.

If the currency of the foreign country ceases to be convertible, there can be a queuing system for availability of foreign exchange (as there is in Argentina):

- A different rate for "trade" deals as from "financial", where financial flows are subject to a worse rate
- Paying for oil and food imports takes priority, so your claim does not get to the top of the list, and all the time the exchange rate is going against you

Then there could be an imposition of large charges on payments out of the country, bureaucratic requirements and reporting. It is a key risk of doing business abroad, such as a pensioner living in The Rump after Scottish independence having their private pension fund with a Scottish insurance company.

These measures should be a priori illegal within the EU, but Cyprus introduced exchange control measures in 2013 as a "temporary" measure, and some are still in place now.

For the reason of Country Risk alone the UK Treasury's Technical Note about how Scotland might take over a share of UK national debt should have made clear that The Rump could not accept a contract under which Scotland undertook to make payments to The Rump over the remaining life of the debts, because that would involve The Rump in taking a substantial, unsecured Country Risk on Scotland. Worse still, it would not be a genuine Sovereign Risk:

- the obligation must be in GBP, The Rump's currency
- if Scotland was using ESL, EUR or any other currency, the obligation is in a foreign currency for Scotland and therefore only complies with the definition of Sovereign Risk that was undermined in the 1980s Latin America debt crisis
- if Scotland was using the GBP, then its obligation is like that of Greece in EUR, only complying the definition of Sovereign Risk that was undermined in the EUR sovereign debt crisis

The alternative would no doubt be unpalatable to Scotland: to back their guarantee with tangible collateral, such as their bullion and currency reserves, or their oil&gas reserves.

In fact the UK Treasury's Technical Note appears to point at Permutation 1d in this study, that Scotland must issue its own debt on Day Zero – it must "raise funds". But interestingly it does not state in what currency.

Now we come on to Sovereign Risk which, until the Latin America debt crisis, was held to be the debt of a government, and by definition a debt free of credit risk to the investor: the resulting mantra (for example prevalent in Lloyds Bank International) was that as a bank one could lend as much money as you liked to a government, they would always pay back.

That permitted Lloyds Bank International to make many loans for infrastructure projects, such as the Parana River Dam, as long as the loan was to a government entity and was partially guaranteed by a Western government e.g. the UK's Export Credit Guarantee Department. The loans were always in Western currencies – CHF, USD, GBP, DEM and so on. The Brasilian and Paraguayan governments were co-guarantors of the Parana River Dam Project financing.

Mexico was the first country in the 1980s to default and it did so in an unexpected manner – it only defaulted on its foreign currency debt to it foreign creditors, but continued to pay out on its peso debt to domestic creditors. This led to the extension of the mantra "governments never default on their own debts" to "governments never default on their own debts **if they are in their own currency**".

The pure form of this is UK gilts - "an obligation of a government in its own currency" – which is then eligible as collateral for loans at The Bank of England, on the basis that it is credit-risk free to The Bank of England as a lender: the theory is that a government can always create the money in its own currency to pay its debts, admittedly at the risk of causing inflation and allowing the currency's value to fall so that a foreign creditor does not receive the same value when measured in the creditor's own currency. The likelihood of a country having to "print money" like that is again part of its evaluation by a credit rating agency.

The accepted mantra from 1983 to 2008 was: lend to a country in its own currency and you will always get the principal and interest back in that currency, but you cannot be sure what its value will be in your own currency.

The EUR sovereign debt crisis showed the flaws in this as far as the EUR was concerned, because EUR Member States had, by joining the EUR, surrendered their control over the exchange and interest rates of their currency, meaning that they could not simply issue new government bonds in EUR to cover off deficits. Investors had a choice and could see through the credit risk on each EUR Member State government, thanks to the rating agencies. Greece might have tried to issue new bonds to cover its deficits, and offered an interest rate of 15-20% per annum, but investors still would not have been attracted to buy. In the end the financing was created via the EU bailout funds within which the EU and then just the EUR Member States put their credit ratings on the line in order to get the investors committed, while trying to limit the come-back on themselves.

A government bond issued in EUR by an EUR Member State therefore cannot be as definitionally risk-free as a gilt – a GBP obligation of the UK government. By inference the Sovereign Risk of lending to any country is increased by their joining the EUR. And by extension the Sovereign Risk of lending to any country is increased by its sharing a currency with another country: The Rump's sovereign risk rating would therefore be imperiled by sharing the GBP with Scotland.

From 1999 investors – led on by the Eurosystem – were induced to regard all government bonds of Euro-In countries as the same, fully fungible, because they classed them as "an obligation of a government in its own currency".

The mantra has now to be extended; to be genuinely credit risk-free and a Sovereign Risk of the purest quality, an obligation of a government must be in its own currency **of which it is the sole user**.

The most telling result of the existence of multiple users of a currency is that it damages the quality of the central bank money in that currency. For this reason alone Scotland should not keep the pound – and then the funds it must raise to take over its share of national debt would not be in GBP. That raises further risks for Scotland that the SNP wishes to avoid coming under the microscope.

Central bank money is any of the forms of money that are regarded as free of credit risk by the central bank of a particular country, being money that represents the sovereign risk of that country. In the UK the forms would be:

- A credit balance on an account at the Bank of England (which can only be in GBP)
- GBP note and coin issued by the Bank of England
- UK gilts

The different forms of central bank money must be fully fungible: instantly exchangeable for one of the other forms at par, without any price adjustment.

The strangeness of the EUR is the fact that the Eurosystem treats these forms of money as fully fungible whereas they clearly are not:

Form	Substance
A credit balance in EUR on an account at a member of the Eurosystem	A credit risk on the central bank where the account is held and on the government backing it, dependent upon the quality of the backing
EUR note and coin	Issued under the joint and several liability of the Eurosystem members: this is the form that genuinely is fully fungible and convertible into a credit balance at any Eurosystem member, regardless of any marking on it showing where it was struck or printed
Government bonds	Entirely the credit risk of the issuing EUR Member State. The crisis showed there was no backing mechanism behind the scenes where different EUR Member States had to support or pay out on one another's bonds simply because they were all in EUR: the ECB was shown as not being a Bank of Last Resort

	Curiously the Eurosystem continues to treat bonds as credit-risk free and to value them at par, when an investor could buy the same bonds from a broker at a 30-60% discount

The point is that, as England Wales and Northern Ireland, we have no benefit from the GBP and The Rump going to a currency sharing with an independent Scotland. We do not want our currency's quality compromised by its being shared by a foreign country.

Lastly it is necessary to qualify the term "redenomination", since this was the term used when sovereign governments joining the EUR passed laws to alter the currency of the financial assets and liabilities in their a country from their own predecessor currency, to EUR. The law's scope was the currency of that country, of which it was the sole user and all of whose central bank money was issued by that country.

The law was binding on all counterparties, and no counterparties changed. Nor did the governing law or the place of exclusive jurisdiction. All bank accounts, loans and securities had their currency altered at the irrevocably fixed exchange rate set for the retiring currency against the EUR, which normally was the central rate of that currency in the ERM against EUR at the time.

In order to force a redenomination within the EU, the government imposing it must be the sole owner of the central bank money in the predecessor currency:

- A redenomination by Latvia of the Latvian lat into EUR was workable because the Latvijas Banka owned all central bank money in lat, and the lat would cease to exist
- A redenomination by Greece to exit the EUR would not have worked, because the Bank of Greece is only a partial owner of central bank money in EUR, and the EUR would still exist
- A redenomination by Scotland out of the GBP would not be workable, either into EUR, USD, SDR or ESL (the putative Scottish pound), because the GBP will still exist
- A redenomination by Scotland out of ESL into EUR or another currency would work, because Scotland's central bank would be the owner of ESL central bank money

The point here is about whether counterparties can be compelled. Redenomination is always compulsory, because the currency of 100% of assets and liabilities must be altered and the predecessor currency retired: one cannot have 5-10% of assets or liabilities staying in Spanish pesetas or Latvia lat.

Even worse would be that counterparties holding assets thought it was a bad deal, but counterparties holding liabilities thought it was a good one: the debtor would then be left with assets in one currency and liabilities in another, a disastrous currency mismatch.

Legal certainty and compulsion must exist, and equal treatment for all parties, and there are strict parameters for this exercise when a country concerned is within the EU and its national laws are subject to further scrutiny and challenge at the European level.

For redenomination to occur in an EU country, the predecessor currency must cease to exist, and the successor counterparty must be the same as the predecessor.

If the predecessor currency continues to exist and the country is in the EU, a customer could overturn the redenomination of their assets or liabilities via the European Court of Justice: this was a major consideration in dissuading a Grexit.

Failing the redenomination option, the move from one currency to another would have to be consensual, not imposed, if the country concerned wishes to remain in the EU.

However the country could leave the EU: then its policies would no longer be subject to the European courts.

Note though that a splitting of UK national debt into debts of The Rump and Scotland is not redenomination: the successor counterparties are not the same as the predecessor.

These are vital considerations for the pathway towards an independent Scotland because it should be absolutely clear that:

- The Rump cannot accept Scotland retaining the GBP;
- Scotland cannot join the EUR via redenomination without having established its own currency first
- Attempting to change currency via redenomination when the predecessor currency still exists involves huge legal risks – unless the country is a genuine sovereign country and is not in the EU
- Attempting to change currency other than via redenomination involves a consensual deal with many counterparties in which they have to be induced to agree, and many may not – and that involves huge risks
- The change of the UK national debt means changes of counterparty, and so must be achieved via an open and consensual deal with creditors
- Scotland has no choice but to take on some of the UK's national debt because it is a joint& several guarantor of that debt now

SECTION 3

Scottish GDP and its development up to independence and beyond

- The GDP section in the SNP Prospectus contains significant 'airy blandness'
- Oil&gas reserves are treated as both proven and at the top end of the available range of estimates
- The non-oil&gas economy is treated as buoyant when several areas could easily shrink upon independence: such as those where Scotland is currently discharging work for The Rump
- Even optimistic assumptions for 2016 and beyond undermine the SNP's airiness

What is the GDP of the shadow independent Scotland now and what will it be in 2016 and beyond? The IFS report gives a range of per capita GDP figures now, dependent upon the allocation of oil&gas revenues: the figures range from a low of GBP23,311 without counting them to a high of GBP27,732 including them in full, based on 2012 figures.

The median is GBP25,521 and this, multiplied by 5.3 million people, gives a Scottish GDP of GBP135 billion as at 31.12.2012. That is the baseline figure used in this paper.

The upper end is used in one scenario: then the result is £27,732 x 5.3 million = GBP147 billion.

The IFS is non-committal regarding the sources of fiscal revenue other than existing GDP (which it assumes will follow the UK average) and oil. Where will be the engine for growth in an independent Scotland? Again, while the subject may be outside the IFS' remit, it is important that there be some credible independent scenarios for Scottish voters to consider.

The IFS report has nothing to say about the sources of shrinkage of GDP and tax revenues, and it is important for Scottish voters that some proper numbers are put against these risks before the referendum date.

This study projects a year-on-year 2% real GDP increase for Scotland whether deriving from "onshore" or "offshore", using the IFS median as the baseline and GDP at the end of 2012 at GBP135 billion. The aim here is not to be pessimistic about Scotland's prospects but to invite the reader to make up their own mind. Is that high compared to what appears to be happening in the economy as a whole?

Assuming this 2% real GDP increase compounded in each of 2013, 2014 and 2015, Scottish GDP on Day Zero at the end of 2015 would be GBP144 billion. This is quite an assumption and there is very little in the SNP Prospectus or IFS to underpin it:

Year	Scottish GDP at year end in GBP billions
2012	135
2013	138
2014	141
2015 = Day Zero	144

The SNP Prospectus states on p16 that "The Scottish economy has key strengths in growth industries such as food & drink, energy, creative industries, tourism and life sciences". On the other hand there is a pie chart on p87 of the structure of the 'onshore' Scottish economy. The 'onshore' portion would be 82.7% of the total economy after independence, 17.3% being the oil&gas portion (p86):

Industry	Percentage of 'onshore' GDP
Agriculture, Forestry, Fishing	1%
Other production	7%
Manufacturing	12%
Construction	8%
Distribution, Food, Accommodation	13%
Transport, Information, Communication	8%
Financial and Business	25%
Government and other services	26%

Financial Services and Government thus total over half of the "onshore" economy, with the areas of "key strength" being far smaller. Indeed the IFS states that 30 years ago Scottish non-oil&gas tax revenues were 3.3% higher than the All UK average: now they are only 0.4% higher. This reflects the slower growth of non-oil&gas industries in Scotland compared to the rest of the UK.

The SNP Prospectus p93-95 and 97-102 certainly lists a number of directional policy statements as to what the SNP would do once in power, but that is not quite the same as a convincing statement of how big the industries are now, what are the growth dynamics, what is Scotland's Unique Sales Proposition as regards these industries and so on.

The SNP would have the Scottish economy as dynamic and self-propelled. Andrew Marr, on his p444, on the other hand cites a long list of industrial investments directed into Scotland – at the behest of Scotiish lobbyists and politicians - to arrest and offset declining heavy industry - hydroelectric schemes, forestry, tourism after the war; then Ravenscraig steelworks, BMC's Bathgate plant, Chrysler's Linwood plant, the nuclear reactor at Dounreay, the Invergordon aluminium smelter, Upper Clyde Shipbuilders. More recently this would be the decision to close the Portsmouth naval dockyard and carry out all such work on the Clyde, a decision which would be reversed upon Scottish independence.

There is a curious echo around the industries the SNP chooses to highlight - "key strengths" sectors like food & drink, energy, creative industries, and tourism bundled together aviation through the SNP's proposed measure to cut Air Passenger Duty by 50% (the SNP, on Prospectus p95, proposes "reducing Air Passenger Duty to boost international connectivity").

The echo is of the UAE (Dubai, Abu Dhabi and Qatar) which also proposes itself as a centre for creative industries, for example through its Dubai Media City – a tax-free zone.

Dubai and the other Emirates have established UAE as a tourist destination and a hub for regional headquarters, based on excellent air links to 2 billion people within 4 hours (Etihad, Qatar Air, Emirates) from airports that are only 25 minutes from the business districts. These corporate hubs can operate from tax-free zones of which there are several. The set-up mimics Dublin Docks or Belgian Coordination Centres in Europe.

The geographical remit of these hubs is MENA (Middle East and North Africa – as far as Morocco), or MENAIP – adding in India and Pakistan. Interesting that French North Africa is more covered from UAE than from France or Switzerland. There is no manufacturing industry in Dubai: it is tourism and aviation, and then acting as a hub. Most supplies appear to come in by air and very little by sea.

But is this Scotland? The SNP Prospectus infers such an open, dynamic, low-tax, low-debt future, whereas there is an alternative vision which now needs to be put.

It is that Scotland is highly vulnerable to the withdrawal of economic activity by The Rump after independence. The SNP prospectus paints a far too rosy picture of the GDP situation particularly in the non-oil&gas sector (the "onshore" economy), and it completely fails to identify the risks caused by the downsizing of the finance and government areas – 51% of the "onshore" economy now - and PFI, and of running public administration on lower economies of scale.

This study uses the IFS baseline for Scotland's tax position in 2010-11 regarding the "onshore" economy:

	Tax revenue	**As a % of GDP**	**Per capita**
Scotland	£45.2 billion	37.9%	£8,651
All UK	£542.9 billion	37.5%	£8,719

The study then accepts – although demand and prices for oil&gas are volatile – that the monopoly for an independent Scotland over oil&gas tax revenues would yield £1,500 per annum per capita. The SNP prospectus projects this only as upside potential with no regard for downside risk.

Scotland's tax take should have increased since 2010-11 if its GDP has gone up, but since the GDP figures used here are based on an IFS range, it seems more solid to use actual tax take figures, albeit outdated and probably on the low side.

The loss of 1 unit of GDP is then taken to cut tax revenues by 0.379 of that unit (across all types of tax), and that for every job lost there is a £100/week addition to social costs that Scotland must bear itself. The result is the following basis of calculation, using IFS and UK national statistics.

Corporation Tax is held to be 7.77% of all tax levied: GBP42 billion out GBP542 billion in 2011-12, on UK government figures: that is assumed to be the pattern in Scotland.

The Corporation Tax Rate is taken to be 28% Big Company/21% Small Company as it was when the other figures were defined. It is unclear what percentage of Scottish Corporation Tax is levied at 28% and what at 21%, so an average rate has been taken, 24.5%.

A 3% - or 3p in the pound –reduction in that rate as proposed by the SNP would take it to 21.5%, which is actually a reduction of 12.24% of 24.5%.

45% of the Scottish population are taken to be in work, which is 2.3 million workers. A reduction of 1% in GDP is taken to make 1% of the workforce redundant, or 23,850 workers.

These figures are unsophisticated individually, deliberately so, but add up to a coherent picture.

Item	Figures used below	Calculation basis
Scottish tax take	GBP45.2 billion	As per IFS
Loss of taxes on 1% GDP fall	GBP452,000,000	GBP45.2 bn x 1%
Corporation tax as % of all UK tax	7.77%	42bn/542 bn
Scottish Corporation Tax take	GBP3,512,673,801	45.2 bn x 7.77%
Scottish Corporation Tax rate	24.5%	=(28 + 21) / 2
Reduction if rate cut 3p	12.24%	= 3 / 24.5
Workforce	2,385,000	45% of population of 5.3 mil
Workers representing 4% of GDP	95,400	2,385,000 x 4%

We have the nine major potential sources of GDP give-up, reductions in tax revenues, and extra social costs.

- Reduction in Scottish “onshore” tax revenues:
    - Movement of pensions & investment activity back into The Rump
    - Movement of government activity back into The Rump
    - No right to tax the Scottish banks on their profitable ‘England&Wales’ operations
    - 3p in the pound reduction in Corporation Tax
- Scottish expenses will rise due to:
    - Social costs involved in GDP reduction
    - Higher costs of doing business
    - Running public services administration on a smaller scale, not then yielding (in the case of tax administration) the GBP250 million per annum in savings promised by the SNP, but in fact consuming a higher percentage of tax revenues than now
    - Disproportionate usage of Private Finance Initiative schemes for funding public assets built in the period 1997-2008
    - The cost of separation: the SNP’s reasons for wanting to keep the pound revolve substantially around how intertwined the economies are, so it is fair to assume that the cost of disentanglement will be substantial

To repeat a statement in the Preface, and spell out the real dangers for Scotland, the oil&gas tax revenues of GBP1,500 per capita per annum should indeed (at current world prices and extraction rates) flow directly into the Scottish exchequer after independence, but this is not new income for Scotland:

- Since oil&gas were first found, GBP1,200 per capita per annum out of the GBP1,500 that went into the UK exchequer has been routed straight back to Scotland as explicit extra public spending per capita under the Barnett formula
- There have been very substantial other subsidies in the form of allocation of public work and investment, earlier Ravenscraig, in future the Clyde naval dockyards

At best the Scottish exchequer comes out GBP300 per annum per capita ahead.

But then we have the leading controversial hypothesis of this paper: that after independence this same GBP1,500 per capita per annum will evaporate in the form of lower tax revenues/extra costs, a loss it will be able to cover thanks to the monopoly on oil& gas tax revenues.

The oil&gas tax revenues of GBP1,500 will simply wash through.

Then, though, Scotland will have to shoulder on its own the GBP1,200 per capita per annum extra public spending that currently exists compared to the rest of the UK. The SNP prospectus, without explicitly saying it, infers that all current public spending would continue at its current level: the stress is on the extra spending that will be possible once the monopoly on oil&gas tax revenues has been established. None of the nine areas of give-up are mentioned in the SNP Prospectus even as a possibility.

The nine areas of give-up are:

Pensions and investment business

- This refers to the surplus volume of pensions & investment activity carried out in Scotland = carrying out of pensions & investment activity that does not relate to meeting the pensions and investment needs of Scotland alone
- A holder of a pension plan who was based in The Rump would for sure wish to avoid Country Risk and insist that the plan was not exposed to Scottish taxation or confiscation risks, the more so when reading of the SNP's assurances that an independent Scotland should be a more equal society
- That inevitably smacks of a redistributive agenda and one that would need to be funded by higher personal taxes on those with assets, if revenues from other sources begin to flag
- The pension plan holder would insist their plan resided "onshore", meaning within The Rump. This is not really a decision over which the Scottish government would have any discretion, unless it tried to block the repatriation of the pension plan, which would only serve to draw attention to the Country Risk

Loss in taxes	GBP904,000,000 per annum	2 x GBP452 mil

Government work

- The surplus volume of public sector workload carried out in Scotland = carrying out of more public sector work in Scotland than relates to discharging public sector needs of Scotland alone
- It has been a Westminster policy over decades to allocate government jobs into Scotland to offset the declining employment in Scotland's own industries. This means that currently an amount of government work is done in Scotland which exceeds the amount of work required to cater for Scotland's own needs. That excess work would be onshored into The Rump at independence, no doubt into Wales, Northern Ireland or Northern England
- The author's research indicates that the share of Scotland's GDP that is "Government and other services" has consistently been 4% higher than for the whole of the UK, and so it is a fair hypothesis that this would equalize over time, noting that an initial move of 2% of Scottish GDP is far less in money than 4% of UK GDP, such that this figure might be an underestimate

Loss in taxes	GBP904,000,000 per annum	2 x GBP452 mil

Inability to tax banking sector profits

- An aspect dealt with elsewhere is the impact on Scottish GDP and tax revenues of reducing the size of Scotland's banks post-independence: the size of the Scottish banks and their risk to the Scottish taxpayer would have to be right-sized to Scotland's ability to provide support to them, in other words substantially downsized
- This does not mean that Scottish banks have to sell off all their holdings; it means that each part of the bank at least has to be separately constituted – which means it pays its own tax bill where it is constituted
- This is not so different from now, except for the vital impact of Scotland and The Rump becoming foreign countries
- In constitutional terms, applied for example to RBS, its subsidiary banks Natwest in England and Wales and Ulster Bank in Northern Ireland would both become tax-paying entities in their countries of operation. RBS would no longer be the parent and could no longer make a consolidated UK tax return. Natwest is profitable: after independence those profits would deliver Corporation Tax only to The Rump. RBS is loss-making, the more so because of its toxic debts, its own and those held in its non-UK subsidiaries. RBS is incorporated in Scotland. If Scotland became independent, why should the toxic debts of a foreign bank be of any concern to The Rump?

Loss in taxes	GBP560,000,000 per annum	GBP2 billion taxed at the big company rate of 28%

Corporation Tax

- The SNP has promised to cut the rate by 3p in the pound
- Corporation Tax is assumed to be 7.7% of Scottish tax revenues
- The current rate has been interpolated as the midpoint between the Big Company rate of 28% and the Small Company rate of 21% at the time the IFS did its calculations – the assumed rate is 24.5%
- A cut of 3p in the pound is over 12% of 24.5%

Loss in taxes	GBP423,123,323 per annum	12.24% of GBP3,512,673,801

Social costs due to GDP reductions

The reductions in GDP are assumed to feed analogously through to job losses: no view here is taken as to whether those are high- or low-value jobs.

4% of the workforce would then draw social benefits that are assumed to cost GBP100 per week per capita. This may be an underestimate given Scotland's generous regime.

Extra expense	GBP496,080,000 per annum	GBP100 x 95,400 x 52

Higher cost of doing business

This is an across-the-board extra expense for business deriving from the increased complexity for them of Scotland being a foreign country towards The Rump, and it would reduce their taxable profits. It is assumed that their taxable profits reduce by 10%, and this runs straight through to the Corporation Tax line.

Loss in taxes	GBP351,267,380 per annum	10% of GBP3,512,673,801

Running public services on a smaller scale

The SNP Prospectus infers that Scotland's public services will be more efficient than those of the UK and so cheaper to run per head. There is no reason to assume that this should be so. Instead, Scotland will be running a more generous regime, and a regime with more elements to it (with the SNP adding to the number), but on a smaller scale. Managing the rights of parents to 600 hours of childcare to half of the country's two year olds requires a bureaucracy, and that costs money. The expansion of the Scottish social safety net but run on a small scale infers a higher cost per capita.

Extra expense	GBP250,000,000 per annum	The equal and opposite number to that which the SNP claims can be saved on tax administration alone

PFI - Private Finance Initiative

- PFI is the technique much loved by Gordon Brown to cause the construction of roads, hospitals, schools and universities where a private company borrows money to do the construction, and then leases the asset to a government entity over a very long period.
- Investment in public services could then be off-balance-sheet as far as the national debt was concerned, but mechanically the government is committed to fund all the payments.
- It has been estimated that an asset put in place via PFI costs the public £5 as compared to £1 if the government had simply borrowed the money in the old way.
- PFI has previously been described by the author as New Labour's method of regenerating the UK's rust belt i.e. those areas most heavily into coal mining, iron & steel, and shipbuilding, and of course those areas with the largest concentrations of Labour voters.
- It would be a fair assumption that PFI had been generously used in Scotland: to make new infrastructure appear without current increases in work or taxes
- PFI debts are currently backstopped by the whole of the UK: that would cease
- The key here would be to identify the lessee of the asset. Upon the independence the commitments of Scottish PFI lessees would become underwritten by the Scottish government and its agencies, in accordance with the way the SNP has laid out the division of the Scottish public sector from the UK public sector in its prospectus.
- Then Scotland alone would be the underwriter of Scottish lessees' PFI debts. How much could this be? There is nothing in the SNP Prospectus at all about this issue

Extra expense	GBP265,000,000 per annum	GBP50 per capita per annum

Cost of separation

There will be a very large bill for the separation. Scotland must shoulder all of it as the separation will have been done at its behest solely. The figure of GBP5 billion is taken, and that may be on the low side, to be written off in 5 years.

If one considers that RBS Chairman Phil Hammond said on 15th January 2014 that RBS has spent GBP1 billion trying to disentangle 600 branches from its network to sell to Santander Bank (Project Rainbow), is it inconceivable that the separation of Scotland could deliver a bill of GBP5 billion?

No doubt both sides will have recourse to the likes of PwC and KPMG: a team of 10 working full-time for three years at a charge-out rate of GBP1,200 per day (220 working days a year = GBP246,000 per team member per annum) would cost GBP7.92 million (GBP246,000 x 3 x 10). How many organisations need to be split? If it is 625 organisations needing a full-time team of 10, you have your GBP5 billion.

Extra expense	GBP1,000,000,000 per annum	GBP5 billion written off equally over 5 years

Oil&gas or ‘offshore’

The above are all issues in the “onshore” economy. Since so much of Scottish independence and the SNP’s plan ride on the oil&gas industry, the supposed 24 billion barrels proven reserves, and the current world market price, it is surprising that there is so little discussion of the “offshore” side.

It as if the whole revenue stream were under lock and key onshore now thanks to Scottish endeavours.

Andrew Marr p436 “The funding of the exploration and production was so heavily dominated by the United States and .. so much of the technology was designed and built outside Britain”

Andrew Marr p437 “The government’s handling of early leases for exploration, blocks of a hundred square miles each, was criticised by the Commons public accounts committee in 1972 as far too generous`, ‘as though Britain were a gullible Sheikdom’.”

Oil&gas reserves are legally committed to a group of parties within existing contractual arrangements. They are not freely and wholly at the disposal of a Scottish government, and could only become so if the government repudiated those contracts upon independence. That could work if Scotland was prepared to remain outside the EU and the repudiation could not be overturned at the European level.

The IFS report is interesting in its comments on oil, that is compared to the SNP’s inference that oil will cause Scotland to flow with milk and honey (or rather with fractions and lubricants), and create a Sovereign Wealth Fund on the Norwegian model. The SNP envisage the Sovereign Wealth Fund as subsidising public spending and pensions into the foreseeable future.

Instead the IFS figures show oil revenues as not enabling a quantum leap because it is too late, too much has been extracted already, and because Scotland’s spending needs are too large for any Sovereign Wealth Fund to shift the dial more than a couple of percentage points.

There is no discussion in either document about the downside risks to Scottish oil&gas revenues:

1. What if the Western world succeeds in greatly reducing its dependence on fossil fuels?
2. What about fracking and nuclear?
3. What if demand for oil reduces and the price drops?
4. What would be the order of shutdown of oil fields with an eye to respective production costs?

The downside risks are as plausible as the upside potential.

Summary of losses in tax and extra expenses

The figures put against the nine areas of losses of tax revenues and increases in costs add up to GBP5,160,470,703 per annum, or, divided by 5.3 million, GBP974 per capita per annum.

Absent any proper figures from an official source, these figures can of course be regarded as too high or too low. Either way, their basis is explained and the reader can make up their own mind. Particularly the cost of separation seems low.

At GBP974 per capita per annum, the give-ups are not so very far away from the GBP1,500 per annum per capita extra income caused by Scotland having a monopoly over over oil&gas tax revenues.

This is the main hypothesis:

- There are substantial extra costs that could completely erode the GBP1,500
- The GBP1,500 is not all extra money anyway: currently the UK is spending GBP1,200 per annum per capita more in Scotland than in the rest of the UK: those payments would stop upon independence
- At best the direct receipt of the GBP1,500 into the Scottish exchequer and the take-over of the GBP1,200 would only result in GBP300 extra per annum per capita: GBP1,200 is already flowing back to the Scottish exchequer from Westminster
- If the extra costs are GBP974 per annum per capita, this completely wipes out the benefits and causes an immediate deficit of GBP674 per annum per capita

And there are further reasons to doubt whether the result would be this good:

- The 2% per annum compound growth assumption has little behind it: there is little detail on the size and timing of flow-through of tax revenues from any economic growth other than taxes on oil&gas
- Taxes on oil&gas are treated by the SNP as guaranteed whereas they are not, and they are treated as all new and incremental, whereas they are not

As the IFS itself says: “Over recent years, tax revenues from the North Sea, if allocated on a geographical basis, would have slightly more than paid for the additional public spending per head that currently occurs in Scotland relative to the UK as a whole”.

The pick-up for Scotland is at best GBP300 per annum, and at worst is nothing at all – or even a substantial loss.

SECTION 4

Scottish spending and Scottish national debt up to independence and beyond

- At best a monopoly on oil&gas tax revenues would pay for the extra Scottish public spending per capita now, and then yield an extra £300 per annum per head
- Extra expenses and the loss of GDP and associated tax revenues mooted earlier could account for the £300 and then add to Scotland's deficit
- The SNP's claims about the share of the UK national debt that Scotland would take over are implausible and accompanied by dubious claims on other assets
- Scotland would take over at least GBP102 billion of debt on Day Zero and the debt amount is likely to rise rather than fall thereafter

The IFS recent study shows Scotland's per-capita GDP, tax-take and household disposable income all to be broadly in line with the rest of the UK, but confirms public spending as GBP1,200 per head higher, and oil&gas tax revenues – if allocated wholly to Scotland after independence – as yielding around an extra GBP1,500 per head. That is the basis of the figure of an extra £300 per annum per head of real money, with substantial questions about how GDP could be adjusted downwards either before or shortly after Day Zero in two ways, and/or public expenses rise.

If those are the issues around GDP, what about spending and debt?

The IFS points out, "An independent Scotland would face some tough long-term choices in the face of spending pressures caused by demographic change. If, as is likely, oil and gas revenues fall over the long run then the fiscal challenge facing Scotland will be greater than facing the UK", and "Public spending in Scotland as a proportion of its non-North-Sea GDP is [also] higher than UK public spending as a proportion of UK GDP. On the other hand, public spending as a proportion of GDP including North Sea output is similar in Scotland to that across the UK."

The IFS weather forecast of some cloud bubbling up differs sharply from the tone of the SNP Prospectus, which perpetuates the myth that loadsmoney is being contributed by Scotland and frittered away in the rest of the UK: on p39 of the Summary in response to a question about cost of independence: "So money that we currently send to Westminster to be spent in other parts of the UK – or on things we in Scotland do not want – will stay in Scotland to invest in a modern efficient system of government for our newly independent country, and to pay for the things we do want".

This is misleading:

- It's all about the oil&gas tax revenues and they are not really "money we currently send to Westminster"
- "Scotland" is not really contributing that money: it is being contributed by international oil companies with American capital. The commodity the tax is being levied on just happens to be coming out of a geographical location to which Scotland, if it were an independent country, has a reasonable legal claim

- It is not true that UK public spending in Scotland goes on things that Scotland does not want: GERS shows it goes on education, health and social security
- There is no mention that the excess of UK per capita public spending in Scotland compared to the rest of the UK more or less equates to the oil&gas tax revenues

This piece of misrepresentation leads on to a further one about how much debt Scotland might take over. Again in the Summary, on p42, in response to a question about national debt: “Scotland and the rest of the UK will agree a share of national debt. This could be made by reference to the historical contribution to the UK’s public finances by Scotland. An alternative would be to use our population share”:

- The first formula would basically mark down all oil&gas tax revenues as Scotland’s contribution, with the numbers being baselined as of November 1975, when the first oil came ashore at Cruden Bay
- It would take no account of the period between 1930 and 1975 when other Scottish industries have been in decline, and when The Rump was supporting Scotland via investments and job allocation
- Nor would it offset the extra public spending per head in Scotland since 1975 compared to the rest of the UK (that was when the Barnett Formula was invented)
- The SNP’s intention under this formula would be to diminish the debt by offsetting the assumed oil&gas tax revenues of GBP1,500 per Scottish resident since 1975, and with no reduction for either the extra spending of GBP1,200 per Scottish resident over the same period or the other forms of subsidy
- The SNP’s wording of “contribution”, as opposed to “net contribution” excludes that the share be based upon the balance of Scotland’s contribution to and net drawings from the UK’s public finances

This is an extremely aggressive line to take, and negotiation conducted on this basis could not fail to be hostile and to result in bitter recriminations going forward.

This line is then compounded with a clear landgrab along the lines of “What’s ours is ours and what’s yours is negotiable”:

The Summary p42 – Question about national debt: “Either way, our share of the UK’s debt is projected to be smaller than for the UK as a whole, which means Scotland is better placed for the future. However, we will also be entitled to a fair share of the UK’s assets, which are estimated to be worth £1,267 billion. We may choose to offset part of our share of UK assets against the debt we agree to take on from the UK”:

- It is obvious that Scotland will have a smaller share because it is a smaller country: if the debt is allocated per capita, then Scotland’s share per capita will be the same as The Rump’s but the SNP’s wording infers it will be less

- It could only be less under the other methods: by including oil&gas tax revenues as Scotland's "special contribution" whilst ignoring all the "special assistance" and extra public spending that flowed the other way
- And what are these UK assets that Scotland should have a "fair share" of? Tower Bridge? The Dartford crossing?
- Who says that the UK's assets are worth GBP1,267 billion? It is appalling that the SNP pluck these vacuous assets out of the air, bring them onto the table as a bargaining chip that their negotiating partner (aka adversary) supposedly has in their hand, and upon which the SNP kindly then agrees to forego their claim – their non-existent claim – in exchange for a concrete benefit
- There is a threat sitting in the wording "We may choose" to forego this claim in some kind of one-way offset operation to reduce the debt Scotland takes on.
- In other words the bargaining approach would be that if the Scottish share of the debt, by population, is likely to be GBP102 billion, the holding up of these supposed assets with a Scottish claim on them enables an SNP response of "you won't let us keep the pound so we have decided not to press our claim on those assets and in exchange we are walking away from the national debt. You made that decision that forced our hand, we have made our choice so it's your fault".
- The problem with that line is that the debts are real and Scotland is currently a joint& several guarantor not just of GBP102 billion but of the entire amount
- These "UK national assets" do not have the same status of reality, and Scotland's claim on them is equally slim

The SNP should beware that this negotiating tack is a Pandora's Box for them, and leads to an enquiry on the validity to Scotland's clam to all of the oil&gas assets:

- Is it really the case that the rest of the UK has made absolutely no contribution to the discovery and exploitation of the oil&gas reserves?
- Are not the oil&gas reserves just as much a part of the "UK national assets" that should be put into the mix and split upon Scottish independence, if the SNP wants to talk about UK national assets?
- Is not the SNP line an extreme example of selfishness where their opening negotiation stance is to lay claim to the pound, to all current and future oil&gas reserves, to seek to diminish the debts they should take over from the UK by excluding consideration of a portion of the expenses that have given rise to that debt, and then to pull some figure out of the air for assets, lay claim to them and then show willingness to give up that claim in exchange for a further reduction in the debt that Scotland would take over?

P70 of the Full Prospectus goes on to quantify the size of national debt and Sovereign Wealth Fund that Scotland would have had, if the UK had not taken all the money:

- It states that "our relatively stronger fiscal position since 1980/81 would have allowed us not only to eliminate a per head share of UK net debt but actually accumulate assets worth between GBP82 billion and GBP116 billion by 2011/12. This would have equated to an asset worth

between GBP15,500 and GBP22,000 per head. In contrast, by the end of 2011/12, the UK had accumulated net debt of over GBP1.1 trillion, equivalent to a liability of GBP17,500 per head"

- This is grotesque: as if none of the difference had been spent in Scotland
- Instead, if one takes a midpoint between GBP15,500 and GBP22,000 and adds it to the GBP17,500, one reaches a figure of GBP36,250 per head as an amount by which Scotland would have been better off had the rest of the UK not taken all the oil&gas money and spent it outside Scotland in the intervening 31 years
- GBP36,250 divided by 31 years = GBP1,169 per annum, more or less the result of the Barnett formula, and exactly the amount of additional public spending made in Scotland compared to the rest of the UK over the same period
- So Scotland's missing Sovereign Wealth Fund is the result of the UK taking all the oil&gas money and spending it in Scotland in the intervening 31 years, not outside

These distortions and misrepresentations are crass and unprincipled, and belie the amicable hopes expressed in Alex Salmond's SNP Prospectus Preface: "I believe that the bonds of family, friendship, history and culture between Scotland and the other parts of the British Isles are precious. England, Wales and Northern Ireland will always be our family, friends and closest neighbours"

- o "closest neighbours" is a geographical certainty unless the intention is to saw Scotland off and float it into the Denmark Strait (presumably to strengthen Scotland's claims on the oli&gas reserves of Norway, the Netherlands and other surrounding countries)
- o Fate dictates your family
- o Choice elects your friends – and if the SNP start from this aggressive negotiating position there really is no chance that Scotland would remain friends with the rest of the UK after independence

So that is the SNP opening bargaining position on the national debt and it is threatening, a try-on of the first order, and implausible. Scotland will have a national debt, and it will be in the order of GBP102 billion.

The question really is where does the debt start on Day Zero, and what happens to it afterwards.

The SNP Prospectus gives the following specifics for the spending plans in their First Budget on P78-9:

- o It is meant to be tax-neutral but it is hard to see how, when the outgoings are concrete and the sources of revenue/savings are nebulous
- o It is to be funded by £600 million per annum reduced spending/increased revenue over 4 measures, none being given an individual figure
- o Free prescriptions, personal care, higher education tuition and concessionary travel
- o Abolish the bedroom tax
- o Extend the tripe-lock period for pensions, locking in higher guaranteed cost of pensions over a longer period than is the case now
- o Abolish the "bedroom tax"
- o Reduce energy bills

- 600 hours of childcare to half of the country's two year olds, as part of a transformational expansion of childcare
- Alterations to Universal Credit
- Increase benefits, tax allowances and tax credits in line with inflation
- Spend 0.7% of Gross National Income on international aid
- These changes are stated to increase spending by around £600 million per annum, none being given an individual figure
- Savings of £250 million per annum on the administration of taxation

Then we have the measures for the first SNP Parliamentary term in an independent Scotland – no estimated costs given – on p79-80:

- 50% cut in Air Passenger Duty
- 30 hours per week of childcare for every three and four year-old and vulnerable two year-old
- Cut Corporation Tax by 3%
- "Examine" an increase National Insurance Employment Allowance for small businesses
- "Commence negotiations to" buy back the Scottish portion of the privatised Royal Mail

We further have on p108 a Youth Guarantee, to be funded partly (though it is not stated up to what part) from EU funds, if Scotland is still in the EU, and then on p109 an obligatory 90-day consultation period for redundancy programmes involving 100 workers or more.

There are no specific cost quantifications, but for the purposes of this study the author has assumed a GBP1,000 per annum per capita cost as deriving from these First Budget/First Term spending and revenue adjustments, that is GBP1,000 on top of the cost of the 3% cut in Corporation Tax which is already factored into the costs mentioned in Section 3.

Now we come to the actual amount that Scotland would take over. As stated above a calculation including the Scotland oil&gas tax revenues but not the Scottish spending is implausible so we will simply go with the formula that is easiest to understand: debt per capita.

On a debt-per-capita basis Scotland will take on 5/63rds of the UK's national debt, and England, Wales and Northern Ireland (The Rump) are left with 58/63, exactly in line with the respective populations.

UK national debt is GBP1.16 trillion now at the end of 2013, according to http://www.ukpublicspending.co.uk/uk_national_debt_chart.html , who project it to rise at GBP75 billion a year in each of 2014 and 2015. The UK chancellor predicts that there will be a primary fiscal surplus in the UK by 2018/19, so one could project that the debt will rise by GBP50 billion in 2016 and by GBP25 billion in 2017.

On those calculations and if Scotland were to become independent in early 2016, its national debt on Day Zero should be GBP102 billion, and The Rump would retain GBP1.19 trillion.

Table 1 – UK debt as at Day Zero of 1.1.2016 and Scotland's share of it calculated by share of population

UK debt at end of 2013	1,140,000,000,000	Scottish population	5 million
Accretions 2014+2015	150,000,000,000	UK population	63 million
UK debt at Day Zero	1,290,000,000,000	Percentage	7.9365%
Scottish debt at Day Zero	102,380,952,380	The Rump debt at Day Zero	1,187,619,047,619

Scotland's debt would then rise by GBP4 billion in 2016 and GBP2 billion in 2017, if its revenue and spending pattern were the same as that predicted for the UK as a whole: its debt would rise by 7.9365% of GBP50 billion in 2016 and 7.9365% of GBP25 billion in 2017. It would then be flat in 2018.

All those figures assume also a continuation of the same cost of debt servicing as the rest of the UK.

Table 2 - Scotland's debt through 2016-2018 based on a rise analogous to The Rump, based off the debt at Day Zero of GBP102,380,952,380

Year	UK debt rise	Percentage	Scottish debt rise	Scottish debt
2016	50,000,000,000	7.9365%	3,968,253,968	106,349,206,349
2017	25,000,000,000	7.9365%	1,984,126,984	108,333,333,333
2018	0	7.9365%	0	108,333,333,333

Then we can extrapolate Scotland's debt-to-GDP, stressing that this is using the IFS median figure for per capita GDP, and always accreting by 2% compound:

Year	Scottish GDP at year end in GBP billions	Scottish debt at year end in GBP billions	Scotland's debt-to-GDP
2012	135	--	--
2013	138	--	--
2014	141	--	--
2015	144	102	71.32%
2016	146	106	72.64%
2017	149	108	72.54%
2018	152	108	71.12%

71.32% as a debt-to-GDP ratio on Day Zero is inauspicious, and it only improves as and when Scotland's budget comes into surplus. The above chart assumes this will happen analogously to the rest of the UK, but there are several reasons for believing that this will not happen.

Impact of higher annual public spending per capita in Scotland

An adjustment is necessitated if one accepts this paper's main hypothesis: that the changes in "onshore" tax revenues will fall and Scottish expenses will rise so as to cause a loss to the Scottish exchequer of GBP1,500 per capita per annum, exactly the amount that the SNP claim will in future flow incrementally into the Scottish exchequer due to its having a monopoly over oil&gas tax revenues.

The extra income/extra expense will be a 'wash', but what will remain is firstly the higher current public spending per capita in Scotland - GBP1,200 per annum higher than the rest of the UK.

There is no sense in the SNP Prospectus that any current lines of public spending will be abolished. But from independence onwards Scotland will have to shoulder on its own the GBP1,200 per capita per annum.

Table 2 above shows Scotland's debt rising analogously to that of The Rump in the period 2016-18. But across the whole period 2012-18 public expenditure in Scotland will have been higher than the UK average, whilst up until 1.1.2016 the cost of this will have been borne equally across the UK, including 5/63rds by Scotland itself. This means that the baseline debt of GBP102 billion is arrived at because, up until Day Zero, 58/63 of that cost is being borne by The Rump, a contribution that will cease on Day Zero.

After 1.1.2016 the entire cost would fall on the Scottish exchequer, which is an increase of 58/63 x GBP1,200 x 5.3 million per annum, or GBP5.8 billion per annum.

This must be added to the Scottish debt from Day Zero and every year after that, in addition to the normal pattern of spending shown in Table 2.

There is a serious outcome to this adjustment.

It was stated above that the baseline debt up to 2018 was calculated assuming that Scotland came into fiscal balance in 2018 because its spending was assumed to follow the UK pattern. This extra burden on Scotland – and reciprocal alleviation on The Rump – causes Scotland not to come into fiscal balance in 2018, whilst giving greater comfort that The Rump might do so. The extra burden goes directly onto the Scottish debt in all three years.

Table 3 – this is Table 2 adjusted for an extra GBP5.8 billion of debt per annum

Year	Baseline	Adjustment	Result
As at Day Zero	102,380,952,380	--	102,380,952,380
2016	106,349,206,349	5,855,238,095	112,204,444,444
2017	108,333,333,333	5,855,238,095	120,043,809,523
2018	108,333,333,333	5,855,238,095	125,899,047,619

Scotland shouldering all of its own costs from 2016 would see its fiscal position continuing in deep deficit, that is unless either its spending could be brought well below the UK average, or its GDP increased.

If that is the case but we stick with the baseline GDP and always accreting by 2% compound, then the result would be:

Year	Scottish GDP at year end in GBP billions	Scottish debt at year end in GBP billions	Scotland's debt-to-GDP
2012	135	--	--
2013	138	--	--
2014	141	--	--
2015	144	102	71.32%
2016	146	112	76.64%
2017	149	120	80.38%
2018	152	125	82.65%

Now we need to go on and compare the debt levels to GDP under the quite optimistic GDP scenarios of Section 3, and extrapolate some scenarios.

SECTION 5

Scottish debt-to-GDP: the key to Scotland's credit rating

- Under the baseline scenario of the supposed extra £1,500 per capita extra oil&gas tax revenues disappearing to cover extra costs, and even under relatively optimistic GDP scenarios, Scotland's debt-to-GDP starts off as inauspicious and declines continuously
- The decline is more or less serious depending upon how many negatives are added
- The topline GDP scenario is kept positive – oil&gas extraction and world prices are assumed to continue to deliver the GBP1,500 per annum per capita tax revenues and Scottish business expands at 2% per annum compounded – although it is not written in stone that either should be the case, and no concrete evidence for it is brought by the SNP

Five other scenarios are considered, and in each case the impact on GDP and on debt. The debt levels used as the base are the ones in Table 3 under "Result".

In all cases it is assumed that GDP grows at 2% off the base figure on 1st January of the year concerned, whether that is from extra oil&gas revenue or from the "onshore" economy.

In the first scenario the IFS' higher figure for the per capita GDP is used to create the base; in all other scenarios it is the IFS' median figure. In no scenarios is the lowest IFS figure taken: that Scottish GDP per capita is the same as the UK average.

To emphasise - the GDP figures in no way take a pessimistic line:

- They use the IFS high or median, never the low
- 2% compound growth is forecast, uninterruptedly, and across all of the economy that is not repatriated into The Rump

Scenario 1 – optimistic: debt is as per Table 3 but per capita GDP is IFS <u>higher</u> end and Scotland grows at 2% compound

Table 4

Year	GDP	Debt-to-GDP
Day Zero	146,979,600,000	69.66%
2016	149,919,192,000	74.84%
2017	152,917,575,840	78.50%
2018	155,975,927,356	80.72%

GDP is thus higher as at Day Zero, and the debt-to-GDP is lower than the 71% based in the IFS median figure. But debt-to-GDP still escalates to over 80% in 2018 because of higher public spending per capita, and that does not include the SNP's First Budget/First Term promises.

Scenario 2 - per capita GDP reverts to the IFS median figure and 2% GDP public sector work goes to The Rump, and Scotland grows at 2% compound

Table 5

Year	GDP	Debt-to-GDP
Day Zero	143,543,185,851	71.32%
2016	143,543,185,851	78.17%
2017	146,414,049,568	81.99%
2018	149,342,330,560	84.30%

2016 GDP is the same as 2015 because 2% of GDP comes back to The Rump, whilst the rest of the Scottish economy expands so as to offset that. The 2% repatriation of GDP causes debt-to-GDP to rise further.

Scenario 3 - per capita GDP stays at IFS median and 2% GDP public sector and 2% pensions management work goes to The Rump, and Scotland grows at 2% compound

Table 6

Year	GDP	Debt-to-GDP
Day Zero	143,543,185,851	71.32%
2016	140,672,322,134	79.76%
2017	143,485,768,577	83.66%
2018	146,355,483,948	86.02%

GDP drops in 2016 because the 2% growth is not great enough to offset the 4% repatriation, and then debt-to-GDP is 86% by 2018.

Scenario 4 - scenario 3 and debt servicing costs increase by 30 bp per annum

This is an important scenario for the rest of this paper because it shows an extra uptick on costs – which have to be added to the national debt – for Scotland's funding cost increasing because the funding is not coming out of the UK pool based on the UK's credit rating, but on Scotland's credit rating alone, and because Scotland has not reached fiscal balance in 2018.

Scotland's shouldering all of its extra GBP1,200 per annum per capita public spending from 1.1.2016 helps The Rump come into balance, but makes it all the more difficult for Scotland to do so. Investor perception reflects this and causes a credit spread to emerge between Scottish and The Rump's debt costs.

This still assumes that Scotland is using the GBP, though regarded as a higher credit risk than The Rump, hence the 30 b.p. per annum spread.

Table 7

Year	Debt	Extra 30 bp cost	Revised debt
As at Day Zero	102,380,952,380	--	102,380,952,380
2016	112,204,444,444	307,142,857	112,511,587,301
2017	120,043,809,523	336,613,333	120,380,422,857
2018	125,899,047,619	360,131,428	126,259,179,047

The extra debt costs have then to be capitalised, because the budget is already in deficit… and this causes a further deterioration of the debt-to-GDP:

Table 8

Year	GDP	Debt-to-GDP
Day Zero	143,543,185,851	71.32%
2016	140,672,322,134	79.98%
2017	143,485,768,577	83.90%
2018	146,355,483,948	86.27%

Scenario 5 - scenario 4 and SNP spends an extra GBP1,000 per capita

This scenario puts a figure of GBP1,000 of incremental public spending per capita in Scotland against the fulfilment of the SNP's prospectus for independence. This is incremental to the current spending, which is already GBP1,200 per capita higher than the rest of the UK. Extra debt servicing cost is kept at 30 basis points per annum, although that is an unscientific estimate: if the debt was already tending towards 80% at the end of 2016 as per table 8 and an SNP government were in the process of increasing its spending in such a way as to threaten a further deterioration of the debt-to-GDP, investors might require even more than a 30 basis point credit premium to buy Scotland's bonds compared to The Rump's.

Table 9 – uses the same base debt figure as in Table 3, adds the extra GBP1,000 spend per capita per annum to it, assesses the same incremental 30 b.p. debt servicing cost as in Table 7, to come up with the final revised debt figure

Year	Debt (A)	£1,000 (B)	A+B	Extra 30 bp cost	Final debt
As at Day Zero	102,380,952,380	--	102,380,952,380	--	102,380,952,380
2016	112,204,444,444	5,300,000,000	117,504,444,444	352,513,333	117,856,957,777
2017	120,043,809,523	5,300,000,000	125,343,809,523	376,031,428	125,719,840,952
2018	125,899,047,619	5,300,000,000	131,199,047,619	393,597,142	131,592,644,761

Then this is extrapolated into the final debt-to-GDP figure:

Table 10

Year	GDP	Debt-to-GDP
Day Zero	143,543,185,851	71.32%
2016	140,672,322,134	83.78%
2017	143,485,768,577	87.62%
2018	146,355,483,948	89.91%

What are the conclusions to be drawn from that? Mainly that the SNP will be constrained as of Day Zero by a block of debt that it must take over, by an economy that may or may not be buoyant, and by its generous current and future spending plans... and that under the assumptions in this study the situation is not looking very good at all by 2018.

So why does Scotland wish to continue to use the pound and what benefits is it hoping to gain by doing so in terms of managing its national debt?

SECTION 6

Scotland's options for its working and debt currencies

- There are several conceivable options and only one of them is for Scotland to keep the pound: admittedly it is the one that has the greatest advantages for Scotland, but that is for totally different reasons than are laid out in the Prospectus
- The SNP contradicts itself by on the one hand presenting an economic case for independence based on the benefits of delinkage from The Rump – and then claiming Scotland must keep the pound because the economies are so intertwined
- The SNP's bargaining position to keep the pound omits a major benefit to Scotland: being released from liability for the debt they do not take over
- That benefit needs no reward in the form of obtaining further benefits such as Scotland receiving a share of "UK national assets": indeed such a discussion would open up a Pandora's Box for Scotland. Why should the oil&gas reserves – currently the property of the whole of the UK – not be included in these "UK national assets" that are on the table for division?

The statements in the SNP Prospectus about Scotland's currency once again major on 'airy blandness' and the pretence that Scotland holds all the cards. The major pretence is that the currency itself is an asset: it isn't. It is a form of valuation of assets and liabilities but not an asset in itself. Not so p18 "The pound is Scotland's currency just as much as it is the rest of the UK's…retaining Sterling as part of a formal Sterling Area within the UK would be the best option for an independent Scotland and for the rest of the UK".

The population of the remainder of the UK might like to have a say on this last point, but of course in the SNP's eyes it is only Scotland that has the right to an opinion: p110: "An independent Scotland will be able to decide our currency and the arrangements for monetary policy":

- This statement must be directly contradicted if the currency is GBP: Scotland should not decide the arrangements for monetary policy in a substantial manner – policy will be reactive to what is decided by The Rump via the Treasury and the Bank of England, with no regard for Scottish needs
- It is wishful thinking in the extreme that Scotland can cut a deal for monetary policy to be set across "a Sterling Area with ownership and governance of the Bank of England undertaken on a shareholder basis" i.e. that Scotland remains a shareholder in the Bank of England: what kind of independence is that?
- There is absolutely no justification for Scotland to have such an influence on The Rump's affairs if Scotland keeps all the oil&gas reserves but offloads most of the responsibility for the national debt
- It is not in The Rump's interests for Scotland to retain the GBP while retaining discretion over the fate of such a large USD-based asset (oil&gas); the existence of Scotland's unilateral decision-making power about oil&gas would have a destabilizing effect on the GBP, and the exercise of those powers would destabilize GBP and The Rump

The SNP's arguments on p111 for a Sterling Area are anyway a substantial contradiction of the economic case for Scottish independence and other SNP policies:

1. Scotland is a big trading partner of the rest of the UK – so why become independent?
2. Companies operating in Scotland and the rest of the UK have complex supply chains across what would in future be a national border - so why become independent?
3. Labour mobility – but in future this would not exist thanks to Scotland's points-based immigration system
4. Scotland and the UK have similar levels of productivity – but elsewhere in the Prospectus the SNP argue that Scotland's productivity is better than the rest of the UK and will become even better after independence
5. High degree of synchronicity in short-term economic trends – the whole economic case for independence is to break with the inhibitions of the UK now, not to continue to mimic them

This is supposed to be a "modern partnership": in an era of such diversity we have many examples of partnerships that are modern because they exist today but are not desirable.

So what is behind this contradiction and the desire to keep the pound?

The SNP target scenario – Scotland stays with GBP and keeps its debts in GBP

The SNP would be hoping that the treaty of disentanglement signed with The Rump would simply allocate GBP102 billion of gilts onto the name of Scotland, with unchanged terms: AAA terms.

That is not feasible. Scotland leaving the UK dissolves the existence of the UK, the obligor of all gilts. The bondholders would have the right to call the bonds in default if that happened without their approval.

Instead there would have to be a switchover offer made to all gilt bondholders, which is explored below.

The UK Treasury's Technical Note is wrong in this respect: it refers to "the continuing UK", which will not exist. The Rump will be a different borrowing entity, and only offer the investor a claim on 58/63rds of the wealth of the UK, Scotland having left.

Whatever the credit rating of Scotland were to be, its cost-of-funds should be higher than current gilts because of the bonds' far lower liquidity. The credit rating of Scotland could not be better than that of the UK because of size and because the UK already has a AAA-rating: all other things like per-capita GDP being equal, a country with 58 million inhabitants will be better rated than one with 5 million.

There have been rumours from rating agencies that they would not see Scotland as a successor of the UK in rating terms at all, but as a complete debutante in international financial markets, having to establish a track record before receiving a favourable rating. That could take five years or longer, and then with no guarantee of a AAA.

This is exactly what the SNP wishes to avoid, meaning both substantial new issuance of bonds and/or getting its Day Zero national debt on the terms applicable to Scotland's own rating and not the UK's.

That takes us back to the point in the SNP manifesto that:

- the GBP currency is an asset shared with the UK, and so...
- Scotland must be allowed to keep it in exchange for its being willing to take on a share of the UK national debt.

This is a distorted version of the bargain that would have to be struck (if indeed it meets the test of a bargain of being between a willing seller and a willing buyer): Scotland would graciously consent to take on 5/63 of the UK's debt for the value received by it from being released from responsibility for the remaining 58/63. If that is the deal it needs no other consideration to be paid by The Rump, indeed rather the opposite.

At the moment the UK national debt is the joint & several liability of the entire UK, meaning that if all of The Rump was bankrupt, Scotland would have to pay everything. After independence Scotland would have no responsibility for The Rump's debts.

The question arises, then, as to whether this release is a fair bargain. Scotland is being released from 58/63 of its liabilities. Should Scotland not pay a consideration for that? There can be no question of Scotland deserving an extra consideration for having its liabilities reduced. That would be a consideration received for a benefit, not a consideration paid for a benefit: the SNP seems to be in some confusion about which direction the consideration should pass in.

Indeed they should both consult a lawyer and listen to the advice: unless they do pay a consideration, the contract to reduce Scotland's liabilities would be invalid, under English law anyway. No doubt the SNP would insist on the release contract being drafted under Scottish law which they can draft themselves if Scotland is not in the EU .

Narrowing the options

We can dismiss the option that Scotland has any chance of not taking over a share of the UK's national debt. In fairness it should receive the same percentage of the UK's currency and bullion reserves as the debt it takes over, to use as the reserves of an independent Scottish central bank. It is unclear from the SNP Prospectus whether it sees the "UK national assets" whose estimated value it quotes as GBP1,267 billion (i.e. GBP1.2 trillion or about the same size as the UK national debt) are these currency and bullion reserves.

Presumably the SNP does not view the UK's oil&gas reserves as a UK national asset now, although it is, from a legal and constitutional perspective, just as much as the currency and bullion reserves.

This selective definition of what is a UK national asset coalesces nicely with the bargaining technique "what's ours is ours and what's yours is negotiable".

We can also dismiss the concept that the Norway template is available to an independent Scotland: too much oil has been taken out to create a viable Sovereign Wealth Fund, of a size that it is in effect the currency reserves backing the Norwegian kroner.

Instead, Scotland will start out life with a significant debt – 71% or so of GDP – and it must find a market for its goods and services, which means principally in the UK and the EU.

It needs to fund the debt, and use a currency that it can back with its own reserves or someone else's.

It needs to have a banking system in which its banks are not heavily exposed outside Scotland compared to their size within Scotland. It will need a deposit insurance fund to back customer deposits, up to GBP85,000 to match the UK scheme. It will need to convince customers to have their bank accounts in the currency of the new Scotland, and to keep their money in Scottish banks – by offering a return and a level of security as good as The Rump's banks and other investment options.

If Scotland remains in the EU it will not be able to erect exchange control barriers around its country and currency, and it will need to ensure interest rates are at the right level to retain savings whilst not attracting an inflow of speculative foreign money, and which enable a competitive all-in cost for Scottish borrowers. And then there has to be enough money for the Scottish government to borrow, and at competitive rates that do not increase the cost of debt servicing.

Not much to think about, then, and the SNP has definitely thought about all of this and, discarding all rational advice and analysis, has drafted its prospectus to reflect the world as it wishes it could be, not how it is. That means a takeover of some portion of national debt as a "continuing liability" – on the same borrowing terms as the UK – or reneging on it on the spurious grounds that Scotland was not a party to the original borrowing (when it obviously was).

The realisation of such a scenario would deliver a very beneficial outcome for Scotland, in the form that either:

- Scotland need borrow nothing because it would declare itself "off the hook" from the UK's debt as a different borrower completely, a new borrower with a clean slate, and palm off The Rump with a gracious agreement not to lay claim to any of the UK "national assets", apart from the oil&gas that is, which it would claim all of; or
- Scotland would take over a block of outstanding gilts with unchanged terms and keep using the pound

In no scenario would Scotland have to issue its own bonds in any currency on Day Zero.

In this Voltairean world Scotland would not have to trouble itself with the likes of Standard & Poor, or the investors they serve.

Currency and debt options open to Scotland

This section of the analysis, rooted in the real world, concentrates on how Scotland would get there on Day Zero to being an independent country with its own national debt, rather than what happens afterwards, because this methodology reveals the dangers for Scotland in all the permutations.

It also reveals the dangers for The Rump, dangers that are concentrated in the initial, unavoidable operation to split off Scotland's national debt from The Rump's. It is to interdict these dangers that the UK Treasury issued its Technical Note, albeit that its interdiction is flawed on the point of the "continuing UK".

The analysis also reveals that the permutations may in some cases be sequential. i.e. Scotland would not be able to go directly to certain options, especially if it was the intention to force a change via redenomination. Redenomination only works – for an EU Member State – if the predecessor currency ceases to exist. Otherwise a change of currency has to be consensual.

There are four choices of working currency:

- ESL
- GBP
- EUR
- Another currency like USD, or a synthetic or pegged currency

Theoretically it is possible to have the national debt in a different currency from the working currency, and just one option is examined on that side – keeping the national debt in GBP whilst using ESL as working currency – in order to dismiss all such options as creating instability.

Five permutations are examined in all:

Nr	Working Currency	Currency of national debt
1	GBP	GBP
2	ESL	GBP
3	ESL	ESL
4	USD or synthetic/pegged	USD or synthetic/pegged
5	EUR	EUR

As we shall see, the first one has the greatest attractions, but it is implausible in the way the SNP has presented it in its manifesto – which implies some kind of behind-the-scenes deal to allocate a block of GBP102 billion of existing gilt-edged securities to become Scotland's sole responsibility after Day Zero, without the bondholders having the right to object.

Instead, even within Permutation (1), it is important to recognise four mechanical sub-permutations:

Nr	Mechanics
1a	63/63 of gilts-in-issue are switched for 58/63 The Rump's bonds and 5/63 on Scotland
1b	Scotland issues a guarantee to The Rump for 5/63 of gilts-in-issue
1c	Scotland takes over responsibility for 5/63 of gilts-in-issue
1d	Scotland issues its own bonds for the same amount as 5/63 of gilts-in-issue, and pays the proceeds to The Rump

The methodology is to work through Permutation 1, addressing each sub-permutation, leading to the dismissal of Permutation 1 completely and in all variants: Scotland cannot be allowed to keep the pound or have its debts in GBP.

There is then a successive analysis and dismissal of all the other options except one.

SECTION 7

Analogy of Czech Republic and Slovakia

- This analogy is frequently held up as a successful "divorce" of two countries but it is of limited relevance to the Scotland/UK because neither the predecessor currency nor the surviving ones were reserve currencies – but the analogy is not totally without relevance
- The first point of any relevance is that Slovakia had to have its own currency – SKK – in order to later be able to join the ERM, mandate redenomination and convert to the EUR
- The second point is that Czechosolvakia's banks had to split into Czech and Slovakian banks, separately capitalized, with the respective central bank being the prime regulator: no-one looking across the border to the other central bank to bail out banks that had gone down
- Thirdly the separation was negotiated without one side coming to the table with a "what's ours is ours and what's yours is negotiable"

Before we go to the analysis of Scotland's options we need to deal with the analogy that is frequently held up, of Czechoslovakia splitting into Czech Republic and Slovakia, each with its own currency. Indeed this was a successful example of a currency de-merger, but the situation is hardly analogous:

- Countries of moderate size -77 and 111 by GDP
- Czechoslovakia was formed out of provinces of the Austro-Hungarian Empire up until 1918, namely Bohemia, Moravia, Carpathian Ruthenia and Silesia. What became Slovakia was mainly within Hungary in 1918, and Silesia within Germany, whereas Bohemia and Moravia had been identifiable administrative units within Austro-Hungary
- Czechoslovakia existed up until 1938, having to cede Sudetenland and then being completely occupied, and split into the two administrative units of Slovakia and Reichsprotektorat Bohemia-Moravia (ruled for some months up to his assassination by the infamous Reinhard Heydrich)
- These two administrative units – with the Sudetenland restored to Czech Republic - are broadly Czech Republic and Slovakia now; in the meantime they were re-united as Czechoslovakia in 1945 and fell under Communist rule until 1990
- The de-merger occurred in 1993, only 3 years after the country was re-established on a non-Communist model, so there was no embedded insurance, pensions and investment infrastructure behind the currency
- Neither the predecessor CZK nor the de-merged CZK or SKK are or were major currencies; indeed the SKK went into the EUR
- Bondholders were predominantly domestic institutions wanting to cater for local pensions and investment needs, so they would have no embedded objection to having their holdings swapped for the new currencies
- The scope of those needs was nil at the end of Communism so the split occurred before they had taken on any dimensions

The UK/Scotland situation...

- Big disparity of size but very close historical links and interweaving of financial and economic ties
- GBP is an international reserve currency, perhaps not of the first rank with USD or EUR, but well up with JPY and CHF
- Gilts are held because there is a deep and liquid market, over a long maturity spectrum with depth along the entire yield curve
- The bonds are AAA-rated and give access to the full faith and credit of the entire UK – 63/63
- These characteristics cause there to be a very big investor base for gilts, and their resulting liquidity pushes down the UK government's cost-of-funds
- There is a huge UK insurance, pensions and investment infrastructure behind the GBP, inextricably linked to the government securities market

However, there is an analogy on three vital points:

1. Slovakia is now in the EUR. It could not go there via a redenomination route directly from CZK, because it was not the monopoly issuer of CZK central bank money. It had to have its own currency – SKK – in order to later be able to join the ERM, mandate redenomination and convert to the EUR
    - Lesson for Scotland – it has to go to the ESL first, before it can go with any other options
2. Czechosolvakia's banks had to split into Czech and Slovakian banks, separately capitalized, with the respective central bank being the prime regulator: that insulated each country from the risks in the other's banking system - no-one looking across the border to the other central bank to bail out banks that had gone down. But it also meant that the banks paid tax separately in each country
    - Lesson for Scotland – Natwest will have to be split off from RBS, as the England/Wales/NI sides of Lloyds would have to be
    - Then Scotland gets no tax from their England/Wales/NI profits
3. Thirdly the separation was negotiated without one side coming to the table with a "what's ours is ours and what's yours is negotiable"
    - The SNP stance cannot lead to a willing buyer/willing seller bargain
    - The outcome will be the kind of deal that inevitably derives from aggressive negotiation, including subsequent recriminations

SECTION 8

The switchover of the UK's gilts upon Scottish independence

- Contrary to the UK Treasury's Technical Note of January 2014 and the inferences in the SNP's Prospectus about Scotland's rights, it is inevitable that all UK gilts are re-issued – because the surviving obligor is legally and economically different from the predecessor
- This has to be done as a consensual operation to the satisfaction of investors
- Other options – including the one stated by the UK Treasury if it is conducted in GBP – for achieving the separation of the national debt if it is still all in GBP are unworkable: indeed the whole operation is not in The Rump's interests because Scotland's debts must not remain in GBP
- There will be substantial obstacles and costs, and the costs must be for Scotland's account
- Scotland's credit rating must be revealed to the market in order to preclude The Rump running a major credit risk on Scotland or subsidizing the independent Scotland, and this open market operation is exactly what the SNP wishes to avoid

The switchover of the UK's gilt-edged securities would be an operation to change the borrower name "UK" to the names "The Rump" or "Scotland". The surviving obligors are legally and economically different from the predecessor.

This is an operation with dangers and risks for The Rump, and high costs, but it is essential as a first step to conceptualise it. Having done so, it becomes clearer why Scotland cannot retain the pound, why it cannot retain its debts in GBP, and why it has immediately to go to the ESL, its own currency – from which it can mandate redenomination into another currency at a time of its own choosing.

The SNP seems to envisage some kind of quiet behind-the-scenes takeover of a block of UK gilts onto its own name, on the UK's existing borrowing terms. That is a non-starter. Even if the UK were to agree that Scotland could have its debt in GBP for a temporary period, it could not be done like that. It cannot be done without a complete switchover of all gilts-in-issue.

Gilts-in-issue cannot be dealt with in such a way as to allocate a portion to a new borrower (Scotland) and another portion to another new borrower (The Rump). The UK Treasury Technical Note is correct in not mentioning that option because:

- The issues are indivisible: the obligor cannot be changed on one gilt from UK to just Scotland or to just The Rump
- All issues are fully fungible: change the terms on one issue and you have to change them on all of them
- Scotland has no legal status in the bonds as a counterparty. The bonds are subject to English law and to the exclusive jurisdiction of the English courts
- Scotland would want its bonds subject to Scottish law and the exclusive jurisdiction of the Scottish courts
- The terms of the current bonds could only be changed in the English courts. Such terms could be challenged in the European courts

Because the obligor is changing (and probably also the governing law and the place of exclusive jurisdiction on a portion), this is not a redenomination. Because it is not a redenomination, investor approval is needed.

This is a bond swap operation regarding all gilts-in-issue. The Rump would have no interest in making trouble with the investors in its bonds just to help Scotland. The operation would have to be conducted transparently and fairly, involving enormous administrative effort and cost – all related expenses for which must fall on Scotland alone.

Operational plan for switchover

Here is how the operation would be conducted, the base variant **Permutation 1a** anyway:

- a formal offer-to-exchange, made ISIN-by-ISIN by the UK as the surrendering issuer quoting its own dissolution as the reason for the switchover
- The surrendering issuer (the UK) would have to buy back the bonds at the market price to be determined by a stated formula on a specific day: settlement would have to freeze on exchanges from that day until the new bonds were listed and trading, although no doubt there would be a so-called “grey market” during this period. That is a market in which bonds are traded before they are listed and paid-in. The grey market usually takes place between the launch of new bond issue and its pay-in date.
- Each replacement issuer - “The Rump” and “Scotland” – would then have to make an offer of replacement bonds with new ISINs, but with the same coupons and maturity dates
- The Rump would offer 58/63rds of the surrendered nominal amount
- Scotland would offer 5/63rds of the surrendered nominal amount

There are some serious dangers and costs:

- Would a bondholder be forced to take 5/63 Scotland and 58/63 Rump in exchange for 63/63 of UK?
- Could they successfully object through the European courts?
- Would there be a level at which voluntary acceptance would mandate acceptance on all e.g. 75%? Do such thresholds stick when tested in court, and in all relevant jurisdictions?
- Could it be avoided that US vulture funds obtain a judgment in a US court for some specious claim that they then seek to enforce against assets of Scotland or The Rump in the USA, such as money flows settling the sale of Scottish oil, oil being traded in USD?
- Why would The Rump take any legal risk with its investor base at all?

Then there would no doubt need to be a price adjustment – separate from the market price - factored into the terms offered to investors as part of the switchover of obligor from "UK" to "The Rump" or to "Scotland":

- The price adjustment would have to be in investors' favour or be zero:
    - If a bond's market price that the investor trades in their bond for is 100.375, they would have to be offered the new bond at 100.375 or less
    - Offering at a price of 100.25 would be a sweetener to reward investors for:
        - Accepting the deal at all
        - Accepting to take 5/63 Scotland and 58/63 Rump in exchange for 63/63 of UK, if there was no option but to do that
        - Accepting bonds that individually are secured on a smaller economic area, although collectively it is the same
- How would this play out in practice?
    - Investors originally bought a bond secured on the full faith and credit of 63/63 of the UK
    - At best they get one secured on 58/63 of the UK
    - Then they have to swallow a portion secured on only 5/63 of the UK
    - Surely they will want a sweetener in their favour on both, and a bigger sweetener on Scotland to give them a higher yield on that portion, assuming Scotland has a lower credit rating
    - In that case the re-buy price for the 100.375 bond might be 'Rump – 100.25/Scotland 100.125', if that reflected the obligors' respective credit ratings and the investors' yield requirements
    - The prices must be stated separately so that The Rump does not subsidise Scotland's borrowing costs
- And The Rump should make Scotland reimburse it for all the sweeteners and costs that affect The Rump, and for any higher debt servicing costs that The Rump experiences for a given period afterwards on subsequent new issues
- Scotland must indemnify The Rump against losses but would have then to take any increased cost-of-funds on the chin itself
- That is the quid-pro-quo, the consideration for being permitted to cease responsibility for 58/63 of UK national debt

This switchover is obligatory under all the scenarios of the working and debt currency, because neither the government bonds of an independent Scotland nor those The Rump are an analogous successor to the current UK's gilts: they must have different ISINs.

The SNP appears to believe that the mechanics can be a quiet behind-the-scenes bond swap mandated on the bondholders by law, but that is not the case: the gilts-in-issue are uncallable, indivisible, fully fungible and subject to English law and the exclusive jurisdiction of the English courts, within the framework of EU law.

Tax issues

This leads on to another potential poison pill, to be swallowed under all circumstances where a bond swap occurs, meaning all possible scenarios.

It is that the bond swap is a taxable event for the investors.

The change of ISIN, i.e. of the obligor, coupled with the mechanics of the buy-back at the then current market price, triggers for the investor an obligation to treat the existing gilt as having been sold or repaid on the switchover date and to treat the replacement bond as a new investment.

This might not be problematical if the current market prices of all the gilts were both the same and at or very near to 100, or "par". But they are not. Because of interest rate changes the prices of gilts very considerably, above and below par, and vary from one another.

Here are two examples of Gilt prices – taken from the Debt Management Office www.dmo.gov.uk on 16/12/13 at 16:56

2¼% Treasury Gilt 2023 GB00B7Z53659

Clean Price	Accrued Interest	Market Price	Yield
94.54	0.62	95.16	2.898%

The price of this bond has fallen under par because its coupon is well below market yields.

5% Treasury Stock 2025 GB0030880693

Clean Price	Accrued Interest	Market Price	Yield
118.49	1.38	119.87	3.042%

The price of this bond has risen above par because the market yield has fallen well below its coupon. This will make it a quite unpopular bond for a buyer to purchase in the secondary market, mainly because they have to invest £119.87 to get a bond with a nominal value of £100.

Price of a gilt-in-issue compared to a newly issued one

The putative new gilt issue terms to institutional investors for 12 years inferred by the yields on gilts-in-issue could be:

Price: 99.50

Interest coupon: 3%

Such a new issue would be priced up so as to be “on the money” (to trade just below par), accepted by investors without a discount bigger than the fees on the issue, and certainly not with a premium. Please note: if the banks sponsoring the issue mis-price it compared to investor requirements, the price will fall below “full fees” and the banks will lose the difference between the amount they have guaranteed to the issuer (issue amount x [issue price less full fees]) and what investors pay.

Investors’ accounting for premia and discounts

It is important to understand the investor’s accounting of discounts and premia below/above “par” – par being the nominal amount of the bond being purchased. The investor prefers a price slightly below par, but definitely not above par: a price of 99.50 for a bond of nominal 100 is perfect. The investor would book the 0.50 discount between the nominal value and the price paid, not into their P&L account at the start, but onto a ledger account to be released evenly into the P&L account over the 12 years, boosting the yield from the coupon of 3% to an all-in yield of 3.05%.

Bonds priced at a premium are less popular: the same bond with a coupon of 3.125% but priced above par would not sell well. Some investors are simply not allowed to buy bonds priced above par. Conservative accounting would cause the premium to be booked as a loss on the investor’s P&L account on the day of purchase, not to be booked onto a ledger account and released into the P&L over the life of the bond as a cost to the P&L.

How investors might react to the gilts switchover

In the case of the Scottish bond exchange and in worst possible outcome, the investor in the 5% Treasury Stock would be offered 119.87 as a buy-back value, would take the cash but refuse to buy the replacement, simply because the new bond is priced above par. That would leave a hole in the exercise because a new investor would have to be found to take on the new bond… and many investors would not want to buy a bond with such a high premium.

In the next worst case they accept the whole deal but, holding the existing issue in their accounts at near to 100, they have to record a profit of 19.8; then, when they are asked to pay 119.87 for a new bond with a 5% coupon for the same date, they have to record 19.87 as a loss.

The profit turns out to be taxable, but the loss is not tax-deductible.

Similarly the investor in the 2¼% bond, holding it at 100 in its accounts, is offered only 94.54 so they have to book a loss of 5.46. Then they are offered the new bond for 94.54 and would like to book 100 as the asset and 5.46 as a profit, so as to balance off the loss, but they are not allowed to: they have to book 5.46 onto a ledger account to be released into the P&L over the remaining life.

This gives them a big loss in the year of the exchange, and a loss that may not be tax-deductible, whereas the annual releases from the ledger account are taxable.

Investors would claim compensation for these losses.

This is speculation and that is the point – it all depends what investors are allowed to do under the accounting rules applicable to their business, and what their tax rules are. Gilts are held globally.

A conflict with their accounting rules could cause major disruptions to investors' P&L accounts and to their ability to pay out, for example on pensions.

It is not impossible that a pension drawdown company might find that its accounting rules stated it had to stop paying out because it had made a "loss" on investments, or that some other technicality caused a pensioner's fund to show they had insufficient money to draw any further in a particular year.

It is the same with tax, but if there was a real loss to investors caused by the UK triggering a taxable event, there would be claims for compensation.

Amount of investor compensation

The main risk would be that the investor in the 5% Treasury Stock would be taxed on a profit of 19.87 if tax rules treated the switchover the same as if the investor had sold the bond, and it was either not possible to offset the premium paid out of 19.87 directly against that amount at all, or possible to offset it only over time.

If no offset was available at all and the tax rate was 20%, the investor would lose 3.974 (= 19.87 * 0.2).

If the offset was available but only over the 12 years remaining life, then the investor would lose the time value of money between:

- Paying out (3.974) to the taxman on the "profit" in Year 1; and
- Being able to offset 1.6558 annually (= 19.87 / 12), at a tax rate of 20% = +0.331166
- +0.331166 x 12 = 3.974, so a complete offset is achieved in cash terms but the amount had to be funded in full in Year 1 and on a declining balance basis over 12 years, creating a carry-cost because that amount of 3.974 should have been available for investment elsewhere

Summary and dangers for The Rump

This is a highly technical subject and institutional investors are subject to many regulations. A disruption such as a switchover of all existing government securities in a reserve currency would be a major event, and there could be no certainty that institutional investors would either agree to the proposals, or would not claim compensation.

The Rump government would have to take very seriously if there were danger of real losses inside UK pension plans. Those losses would have to be allocated to Scotland as their cause.

To repeat – this is the core of the operation that would have to be carried out under all scenarios of Scottish separation and it contains major risks and costs for The Rump. The costs must all be borne by Scotland as the initiator of the separation, but it may not be possible to quantify and gain indemnity for the very serious lasting damage that could be caused to The Rump's financial markets by this operation, nor the future costs.

At least it can be avoided that Scotland continue to cause risk - by not allowing Scotland to keep the pound.

SECTION 9

Unworkable alternatives for Scotland's assuming a share of the UK's national debt

- Other conceivable ways for Scotland to take over some of the UK's national debt are unworkable and/or strongly against the interests of The Rump
- This why the UK Treasury's Technical Note of January 2014 simply stated that Scotland would have to "raise funds", rather than "raise funds in GBP"
- Scotland could conceivably launch its own bonds in GBP, but that would cause Scotland to reveal its independent credit rating…
- … but The Rump cannot allow Scotland to keep the pound anyway, and the Treasury must know this
- Bottom line: Scotland cannot keep the pound

There are three conceivable permutations for Scotland "taking over a share of UK national debt" other than via the bond switchover. Two are mechanically unworkable; the other is not what Scotland wants to do. The bottom line is – Scotland cannot be allowed to keep the GBP.

Thus all three permutations go off the table for their own reasons, as well as the overriding one:

1. **Permutation 1b**: Scotland issuing a payment guarantee to The Rump for the capital and interest payments on GBP102 million of gilts-in-issue
2. **Permutation 1c** - for Scotland to simply substitute the UK as obligor on GBP102 million worth of gilts-in-issue
3. **Permutation 1d –** Scotland issues its own GBP bonds, the permutation inferred by the Technical Note if Scotland' debts are to be in GBP

In all three cases the Scottish national debt would remain in GBP on Day Zero, which is not in The Rump's interests because it establishes a second Sovereign Risk borrower in the currency, and you cannot have two without the currency itself being debased.

Anyway, in fairness we should go through the permutations

Permutation 1b: Scotland issuing a payment guarantee to The Rump for the capital and interest payments on GBP102 million of gilts-in-issue

Perhaps the SNP feels it may be able to get away with this one but it is a non-starter. Factually Scotland is a joint & several guarantor of all gilts now, and does not cease to be in that position until it has satisfied the claims of all bondholders. That claim needs to be released, not perpetuated, and it needs to be done in such a way that The Rump does not have a future repayment risk on Scotland.

By accepting a payment guarantee from Scotland The Rump would be taking a Country Risk on Scotland over a long period:

- Is The Rump even legally permitted to do that?
- What is the precedent?
- How should The Rump evaluate the credit risk aka what is Scotland's credit rating?
- What would the guarantee fee be?

Scotland would not wish to pay a guarantee fee, but without one Scotland's guarantee would not be legally enforceable, under English law anyway.

Why, if this permutation was desired, should not The Rump demand tangible security, such as a lien on oil&gas reserves, or the pledging of Scotland's currency reserves and their lodgement in the vaults of the Bank of England?

This would be a Pandora's Box for Scotland too, so this option falls away.

Permutation 1c - for Scotland to simply substitute the UK as obligor on GBP102 million worth of gilts-in-issue:

- Non-starter because the issuer is different: this would default the bonds moved onto Scotland's name and cross-default all the others
- Scotland would like this permutation is it got allocated the long-dated low-coupon ones: that would be nice, but investors might dump them once they knew they would be Scottish bonds and not the UK bonds they had bought
- If it was the short-dated ones, it would give Scotland a liquidity risk

Permutation 1d – Scotland issues its own GBP bonds

Another variant is that the entire gilts-in-issue are switched to The Rump's name and on Day Zero. This is the variant inferred by the Technical Note if Scotland' debts are to be in GBP, but, contrary to the wording of the Technical Note, this must still be a switchover and so it does not avoid all the problems above by any means: the entity 'The Rump' is not the same as the "continuing UK" in the Treasury's Technical Note.

The offering to investors for this case would be a simpler: the successor bonds would contain no claim on the Scottish tax base at all.

Scotland would then issue its own GBP102 billion of bonds, subject to Scottish law and to the exclusive jurisdiction of the Scottish courts, within the framework of EU law. The proceeds are used either (a) to buy and hold a new issue of gilts by The Rump, or (b) to make a payment in cash to The Rump. The amount would have to be higher than GBP102 billion in order to cover The Rump's costs, any extra debt servicing costs for The Rump, and a risk premium for being allowed to continue to use the GBP.

The bonds would have no connection with The Rump apart from currency, although it is the currency of both countries, the same as Greek bonds in EUR have no connection to German bonds in EUR.

What are the terms and conditions on Scotland's GBP bonds? In the SNP world they are the same as the UK's terms, but in the real world they depend upon investor appetite within their investment grid, set by their investment policy committee – and this is an examination that the SNP wishes to avoid because the results are heavily dependent upon credit rating. The grid determines what money the investment manager is allowed to invest in a particular issuer's bonds:

- Given the credit rating of the issuer
- The characteristics of the bond...
- Primary:
    - Currency (is the investor permitted to buy bonds in that currency at all?)
    - Amount
    - Maturity
    - Yield
- Secondary
    - Price compared to par
    - Place of listing (Luxembourg is better than Bangkok)
    - Liquidity
    - Governing law (English good; Nigerian law bad even for a bond of a Nigerian issuer)

Here is an example grid of a USD-based institutional investor:

Rating >>>	**T-bills**	**AAA**	**AA(+)**	**AA-/B+++**	**B++**
Amount USD mil	∞	500	300	200	---
Tenor Years	30	15	10	7	---
Return b.p	T	T+10	T+20	T+30	---

- T-bills are the US government's obligation in its own currency which it uses and controls
- T-bills are a risk-free investment and constitute central bank money for a US investor
- 30 years ("The Long Bond") is the maximum tenor that T-bills are issued for

- ❖ And for each notch that an issuer's rating falls, the bonds slips towards the right as far as the investor is concerned...

Characteristic	Impact
Amount	• Each new issue is smaller • Total investor appetite reduces • More issues have to be launched to raise the same amount • Greater market risk
Tenor	• Shorter maturity for new issues • Issues have to be launched more frequently • More frequent refinancing/liquidity risk
Return	• Bonds are less liquid in the secondary market, pushing up their yield • That drives up new issuance cost • Investors want higher returns for the higher risk and lower liquidity • More expensive debt servicing

- ❖ And if you go below B+++, your bonds "drop off the board" and the market evaporates...current holders may be forced to dump bonds due to their policy

International investors are generally permitted to buy bonds in GBP, they are comfortable with English governing law, and they like bonds to be liquid as gilts are: in other words they buy the bonds everyone else buys.

Fewer investors will go for a bond under Scottish law, which in turn reduces liquidity, and, as foreign investors, they may well take some time to get comfortable with buying bonds in a new currency – like a Scottish currency.

In all cases the yield requirement will go up as other characteristics fail to measure up to the ideal. The credit rating is a rating of the particular bond and thus of all the characteristics taken together.

So we come back to the question: what will be Scotland's credit rating on these GBP bonds?

Not only that, this permutation is still dangerous for The Rump, to have a competing issuer in its market space, claiming to be offering government bonds and potentially outbidding The Rump for money and increasing The Rump's cost-of-funds.

And it is not even that good: this is an issuer with discretion over lifting 24 billion barrels of oil and selling them on world markets. That involves an oil company – or the Scottish government - selling the USD equivalent of the oil&gas tax revenues in order that those revenues can be spent in GBP – which will cause the GBP to appreciate in value, regardless of what was in The Rump's interests.

Because of this point alone there is high risk to The Rump under all scenarios of Scotland keeping the pound. The damage to the quality of GBP central bank money is an equally strong reason.

Scotland can therefore not be allowed to keep the pound and all Permutations 1, all of (a) – (d) fall away.

Where the UK Treasury’s Technical Note states that Scotland will have to “raise funds” to take over its share of UK national debt, it does not say in which currency. In effect the wording rules out Scotland keeping its debt in GBP, which, as we shall see from the next section, rules out its keeping GBP at all.

SECTION 10

Scotland with its own working currency but debts in GBP

- In this scenario Scotland does not keep the pound – but it keeps its debts in pounds
- This is unworkable as exemplified by the issues raised for Greece under a Grexit from the EUR, where it would have faced national debt in foreign currency, or else in its own currency with a mark-up of 30% in the debt's value
- This eliminates all scenarios where the national debt is in a different currency from the working currency

Having ESL as the working currency but with the national debt in GBP is the easiest permutation to deal with. With it one deals with all permutations in which the working currency and national debt currency are different.

It combines an unstable future with the same insurmountable practical and legal difficulties in getting there as beset the option of Scotland keeping the pound as both its working currency and its debt currency.

It is not credible for a country to have all its debts in a foreign currency.

A credible currency has a government bond market behind it, and Scotland would want such a market to exist and enable annuities to be bought for Scottish pensions as there would be no Sovereign Wealth Fund to do that.

National debt in a foreign currency is the poison pill awaiting a country exiting the EUR, so Scotland would not willingly choose this as an exit scenario from the GBP. Its threat is greatly magnifying the value of a country's debt when expressed in a new working currency. Either that or an exit from the EU as well: Hobson's choice

For example, a Grexit would have involved Greece adopting a new drachma as working currency, but at what rate against the EUR?

- the original "irrevocably fixed exchange rate" of 340.75, the only legal basis with a predecessor?
- A viable market rate representing the realistic value – e.g. 450, 30-40% lower?

If it was the original "irrevocably fixed exchange rate" of 340.75, the new currency would have dropped like a stone on the first day of trading anyway, by 30-40%, to the market's valuation, causing the government bond market to crash and yields to shoot up – increasing the future cost of debt servicing.

Not only that, a redenomination by the Greek government of its own EUR debt into new drachma at the 340.75 rate would be challengeable. The holders of the bonds in EUR would have been able, in the European courts, to overturn any unilateral measure by the Greek government to switch EUR bonds for new drachma bonds at an exchange rate determined by the Greek government that also represented a diminution of the bonds' value. Greece would only be able to evade this challenge if it also left the EU.

If Greece had chosen the 450 rate to redenominate at, its debts in new drachma would come out as 30-40% bigger than if expressed using the rate at which they were redenominated the other way. This would increase debt servicing cost and exacerbate the very problem that they were leaving the EUR to get away from.

Unable to redenominate its debt into new drachma at an acceptable rate, the Greece government would have to allow it to stay in EUR. Then they introduce the new drachma either at 450 or at the intended 340.75 rate and see it plunge to 450: they end up in the same place, thus magnifying the size of the national debt in terms of new drachma by 30-40%.

Even worse, the debt is not even in new drachma.

Every bond coupon and capital instalment would have to be bought in EUR by selling the new drachma, pushing down the foreign exchange rate even further, and further magnifying the cost of foreign debt when measures in new drachma.

All roads would have led not to Rome but to higher debt servicing, magnified debts, bigger currency mismatches and thus economic catastrophe, one road even leading to EU exit.

So the road to having debts in a currency different than the working currency is a non-starter: as Greece with the new drachma and debts in EUR, so Scotland with the ESL and debts in GBP.

SECTION 11

Scotland with its own working currency and its debts in that currency

- ESL – the 'livre ecossais' – the normal path for an independent nation, and the SNP says Scotland should be independent
- So what's not to like? Establishing an independent financial infrastructure, central bank, deposit insurance fund, national debt issuance, secondary market for national debt, yield curve, base interest rate – and credit rating
- And issuing ESL government bonds to the value of GBP102 billion to the pay off their share of the UK's national debt… But what happens to the ESL's exchange rate when they sell that amount of a fledgling currency?

The next permutation is the most obvious of all for an independent Scotland: Scotland creates its own currency – the ESL, le livre ecossais - and has its national debt in that currency.

In order to take over its share of UK debt, it has to issue bonds denominated in ESL in the equivalent of the GBP102 billion of gilts it has to take extinguish. It has to do that on Day Zero. When the bond proceeds in ESL come in, it has to sell them against GBP and either (a) buy GBP102 billion of gilt-edged securities or (b) simply pay that money to The Rump so that The Rump could pay down the UK's debt from 63/63 of GBP1.3 trillion to 58/63.

- What investors will be permitted to buy bonds in ESL as soon as it is launched?
- Will the investor base be limited to Scottish investors, who feel they have to take these bonds to match the currency of their liabilities? How much can they take on of the GBP102 billion?
- Or will the amount needed force Scotland to attract foreign investors, who have the choice not to invest?
- What would be the credit rating on those ESL bonds?
- What is the benchmark rate of interest on them?
- What reserves sit behind the currency if there is no Sovereign Wealth Fund?
- For what maturity date can the bonds be issued – 1year? 3 years? 10 years?
- Who would take on the initial contract to sell GBP102 billion worth of ESL against GBP? And on what terms?
- What foreign investor would buy bonds in ESL if they knew that the first action of the Scottish Treasury would be to sell the ESL bond proceeds and buy GBP, depressing the exchange rate of ESL?
- Who would invest in any asset in ESL at all if they knew that was the plan?
- Would not the market pre-sell ESL as aggressively as possible in advance and drag the rate down to a level (as would have happened with a free-floating new drachma settling at 450/1 EUR) where the market "sees value" (aka a killing)?
- If the Scottish government still had to press ahead with the plan they would have to reward investors with a very generous interest coupon, pushing up the debt servicing cost
- This is sounding very much like what happened when the GBP was forced out of the ERM

This option exposes the credit rating of an independent Scotland on Day Zero most openly – because it includes exposing the currency - and is thus a non-starter as far as the SNP is concerned, but the central scenario as far as The Rump is concerned.

Scotland would have to implement a number of other measures:

Subject	Action
Scottish central bank	To be established as prime regulator of Scottish banks and holder of Scotland's currency reserves, and to issue Scottish note and coin and be the agent for government debt
Exchange rate for 'redenomination'	What would be the exchange rate to be used for the assets and liabilities being redenominated out of GBP and into ESL? 1:1, like to ECU to the EUR?
Deposit insurance scheme	Establish such a scheme with a ceiling of at least ESL85,000 if the rate is 1:1
Size of domestic banks	To be not so large that they weigh down the Scottish economy if they run into trouble
Foreign interests of domestic banks	The Scottish central bank cannot be the prime regulator called upon to stand behind, for example in the case of RBS Group, NatWest in England and Wales, Ulster Bank in Ireland and Citizens Bank in the USA
Scotland's currency reserves	5/63rds of UK reserves, to be held in what form?
Payment systems	Scotland to build its own, with separate IT, collateralisation and settlement arrangements
Payment system access	Scottish banks would be the main clearers, with access methods available to foreign banks as required by European law (assuming Scotland was still in the EU)
Payment system collateral	The Scottish central bank would define its "central bank money" and clearers would have to hold collateral to immunise the Scottish central bank against risk on them since central banks are not allowed to run credit risks
Payment system collateral currency	The collateral must be in ESL
Payment system collateral quality	The collateral must be in "central bank money", which is credit risk-free as far as the Scottish central bank was concerned
Forms of "central bank money" in ESL	• Credit balance on an account at the Scottish central bank • ESL note and coin • Scottish government bonds

Under this scenario – with Scotland in the EU and therefore unable to introduce exchange controls – several important questions would need to be answered:

Issue	Problem
Bank account redenomination	How do you force customers to accept the redenomination of their GBP accounts into ESL when GBP still exists and both currencies are EU Member State currencies? This is not a true redenomination as defined in the Glossary and Section 1
Exchange rate	What would the rate be and how would it be protected, so that account holders do not lose value? How big are the reserves? Can the oil&gas reserves be put on the table to back the currency?
Interest rate	What would be the base interest rate in ESL across different maturities? How would it be held high enough to stop the currency falling and to stop investors switching away from ESL? How would it be held low enough to stimulate the Scottish economy and not increase Scotland's own debt servicing costs?
Deposit insurance	What should this level be, to at least match The Rump's level without causing a flight-to-safety in either direction?

Of these issues the most difficult is Bank account redenomination. It is another one that held the Grexit back. Greece would not have been able to remain in the EU and forcibly redenominate EUR accounts into new drachma as a reversal of the original joining process. The old drachma ceased to exist anywhere: the EUR would continue to exist even if the new drachma were introduced. Under EU law account-holders would be able to reverse any such forced redenomination of bank accounts. Borrowers might also resist, depending upon the rate: if it was bad for savers it might have been good for borrowers.

So the nightmare scenario would have been that savers overturned the redenomination at the European level but borrowers agreed it: then the banks are left with liabilities in EUR – an appreciating EUR – and assets in the new shrinking drachma. They would be like the Greek government: all debts in foreign currency. A disastrous mismatch and a one-way ticket to bankruptcy, further exacerbating a key trigger for exiting the EUR in the first place.

Scottish banks, with Scotland in the EU, might well face a resistance to a switchover of liabilities from GBP into ESL, even if assets could be switched. That would leave them with an impossible asset/liability mismatch and cause a constant need to do swaps in the foreign exchange market to create synthetic ESL liabilities. The frequency and size in which such swaps would be done – and always in the same direction - would widen the market's bid/offer spread: that happens when there is only one-way interest in the market, and it depresses the value of one side of the trade (ESL) against the other.

The antidotes would all be poison to the banks themselves, or to the Scottish government:

- Offer much higher interest rates in ESL than in GBP
- Offer a sweetener to redenominate
- Pass the costs on to borrowers increasing loan interest rates, and impacting GDP growth
- Offer deposit rates in ESL that pull money into the bank – but reduce the supply available to the Scottish government itself, force the Scottish government to offer higher interest rate on its own debt

The responses to all the questions come down to what reserves of firepower exist to protect the currency – meaning what is the firepower of the Scottish central bank.

Mr Draghi caused the 'Draghi Bounce' in the EUR by declaring that the ECB and the Eurosystem would do "whatever it takes". At least that is what the market heard and bounced accordingly. What he actually said was that the ECB and the Eurosystem would do "whatever it takes within the scope of our mandate." The mandate falls far short of doing "whatever it takes".

What would the Scottish central bank be allowed to do, and what would it be able to do? The former depends upon its charter (still to be written), the latter on the currency and bullion reserves they can bring to bear, and whether the oil reserves be put on the table to back the currency.

The answers to both are another aspect in the rating agencies' evaluation.

So it boils down to the same question again: what will Scotland's credit rating be?

SECTION 12

Scotland uses USD or a pegged/synthetic currency as its working and debt currency

- This option is not unthinkable for a petro-economy, if the SNP really thinks Scotland is a petro-economy and has 24 billion barrels of proven reserves
- The analogy of the UAE surfaces again: a petro-economy with an "onshore" economy that is very "offshore": aviation, tourism, media, management centres and very low external debt
- But Scotland is really not like that at all, contrary to the picture painted by the SNP, so the analogy fails along with the viability of this option

This is an option worth reviewing. Scotland would adopt a synthetic currency, or USD, or a currency pegged to USD or to the IMF's SDRs (Special Drawing Rights). ESL could then be pegged to USD or SDR rather than being a free-floating currency.

NOK, Norwegian kroner, is in a sense pegged to the USD both directly, and indirectly through Norway's Sovereign Wealth Fund.

NOK disposes of huge terrestrial and undersea reserves, the undersea reserves being the oil&gas and in currency terms pegged to the USD.

The terrestrial reserves are the Sovereign Wealth Fund. The fund's value is expressed in NOK, but it is actually holding assets in a basket of convertible currencies, majoring in the reserve currencies USD, EUR, JPY, GBP, CHF. The wealth fund is then like a pool of Special Drawing Rights, although a portion of assets will be held in currencies that do not feature in SDRs.

So through both the oil&gas reserves and the Wealth Fund NOK is a synthetic currency with <u>informal</u> pegging to the USD: NOK is used for onshore local dealings which are modest in scope compared to the reserves that determine the NOK's value. On the strength of that the NOK then becomes a robust currency with low interest rates, albeit still a minor currency.

The route of <u>formal</u> pegging is not implausible for a petro-currency, for example the AED (United Arab Emirates dirham). On January 28, 1978, the dirham was officially pegged to SDRs. In practice, it has been pegged to the U.S. dollar for most of its existence. Since November 1997 it has been pegged at 1 USD = 3.6725 AED. This is plausible because of the preponderance in the UAE of USD-based industries compared to ones which would have any basis in AED itself:

- Oil and gas
- Aviation
- Tourism
- Regional management centres
- Special economic zones

While these industries feature in the list of “key strengths” according to the SNP, and the SNP would like to hold out Scotland’s economy as being a mecca for international activity, the reality is that it has few of the characteristics of a UAE. Its oil and gas industry is not large enough compared to the rest of the economy and its international trade. The latter is primarily in GBP and EUR, so the selection of USD or SDR would create a dangerous currency mismatch.

An interesting option, but only right for Scotland if one accepts the ‘airy blandness’ version of the Scottish economy.

SECTION 13

Scotland, the EU and the Euro

- As The Rump's interests are not served by allowing Scotland to keep the pound, and as the SNP knows the risks and unrealism about ESL, USD, SDR etc, we have the central option – the EUR, with ESL as an inevitable stepping stone towards it
- Other SNP policies breach the contention of 'continuity of effect' that is supposed to guarantee automatic EU membership, so the likelihood is that Scotland has to re-apply as a new member: The Rump cannot then possibly take the risk of a co-user of its currency failing that process and being outside the EU
- Nor can it take the risk of Scotland being successful and either choosing to join the EUR or having the EUR mandated on it. The first step down that path would be for Scotland's currency to go into the ERM and be run by the European Central Bank
- The pathway is ESL >> ERM >> EUR: Scotland will have to accept the EUR if it wants to be an EU member, as the price that other EU members will demand for overlooking Scotland's breach with the principles of 'continuity of effect'
- And that pathway is the poison pill that the SNP know it absolutely must avoid

The SNP's attitude to membership of the EU is spelt out on p24 of the Prospectus: "We will approach EU membership negotiations on the basis of the principle of "continuity of effect". That means that Scotland's transition to independent membership will be based on the EU treaty obligations and provisions that currently apply to Scotland under our present status as part of the UK…While the Scottish government recognises the economic and political objectives of the Eurozone, an independent Scotland will not seek membership".

However, on p27 the SNP's attitude to immigration is revealed: "The Government plans, following independence, a points based immigration system, targeted at particular Scottish needs". This is incompatible with EU law and EU membership; it conflicts with the "continuity of effect" claimed above as it is a breach of the treaty provisions to which the UK is currently a party and a full adherent.

The SNP also plans to retain the tuition fee structure for English students at its universities – that they pay in full – whilst not demanding this of students from different EU member states. Scotland and The Rump would in future be different EU member states but Scotland intends to breach its current practice – and EU law – by discriminating against students from England.

Thus the intention is for a selective and self-serving definition of "continuity of effect", giving the SNP what it wants but selectively and unilaterally denying others their legal rights.

This line will not stand up. Either Scotland will have to rigorously adhere to EU law to demonstrate "continuity of effect" (rather than using it as a fig leaf and a transparent ruse to pretend it can slide seamlessly into the EU whilst still avoiding things it does not like), or accept that it will apply like an Accession State.

“Rigorously adhere to EU law” and “apply like an Accession State” come down to the same thing in the area of currency: accepting Brussels’ rules.

Now we come to the poison option for the SNP.

The SNP has stated that Scotland will remain in the EU. The SNP is right to state that Scotland needs to remain in the EU to enjoy market access, but it has not been quite so candid as to the true reason why Scotland should not join the Euro: this is because it does not want to have its current and future spending plans constrained.

As a result it must remain outside the EUR and not subject itself to the Treaty on Stability, Co-ordination and Governance in the EMU (= the Fiscal Stability Treaty).

The IFS report makes reference, relative to The Rump, to Scotland’s ageing population, its healthcare requirements, and its promise of higher pensions. The SNP’s promises are thus an intensification of a major problem in the EU as a whole: the ongoing disparity between citizens’ expectations about living standards, retirement age and life expectancy on the one hand, and their personal economic contribution/value-add on the other. The SNP pretends that that oil&gas tax revenues will fill this gap in perpetuity, without the Scottish people making more of a contribution themselves.

This study proves that there is only an extra GBP300 per annum per capita to fill that disparity in an independent Scotland in the best case, and in the worst case the disparity will widen by GBP1,700 per annum per capita.

In order to control the fiscal effects of the disparity within the Eurozone, the Euro-In countries have signed the Fiscal Stability Treaty to dictate what will have to happen on the public spending side over the next 30-40 years in the absence of a change of the economic model on the public revenue side.

The Fiscal Stability Treaty requires EMU Member States to reach a 60% ratio of government debt to GDP by 2030. EMU Member States are furthermore required to give early recognition to the need to make further spending cuts to take account of increased age-related costs throughout the next 50 years.

The Treaty commitments would be poison to the SNP’s prospectus for an independent Scotland and that is why Scotland must be kept out of the Euro.

However, looking at it from the consideration of launching the national debt and funding it at a low debt-service cost, the picture is completely different.

Going into the EUR would give a very competitive cost-of-funds, the base being the yield on German government bonds. Scottish bonds would experience a credit premium based on Scotland’s rating, whatever that is. If it were only A and not AAA, and our putative investor wanted a 30 basis points yield premium over the lowest-risk investment (as per both the example Investment Grid and the calculations on Scottish debt-to-GDP), then paying 0.30% per annum over Bundesanleihe would not be a bad deal at all: 2½% all-in compared to 3%+ in GBP. What’s not to like?

Even better, Scottish government bonds would be eligible as collateral at all Eurosystem central banks under the rules of EMU, a rule that creates a ready market for such bonds amongst institutional investors: this rule more or less guarantees that an EMU Member State can raise money anywhere in the EU by assuring our putative US investor that the bonds are liquid in the secondary market, and where there is an active secondary market there is a receptive primary market for new issuance as well.

Scotland could draw funds whenever it liked and surf contentedly along the Bund curve with an unobjectionable all-in cost-of-funds in EUR – but bought at the price of adherence to the Fiscal Stability Treaty. Put another way, the EUR benchmark cost-of-funds is kept low by the comfort that international investors draw from the existence of the Fiscal Stability Treaty, and all Scotland would have to worry about would be the credit premium it would pay compared to Germany.

This pathway is solid and by far the most likely one if Scotland wants to remain in the EU: Scotland would have to re-apply for EU membership and then, upon acceptance, it would have to commit to join the EUR and abide by the Fiscal Stability Treaty – poison to the vision of an independent as portrayed in the SNP's manifesto but an antidote to any worries about the cost of debt servicing, and indeed the availability of funding, all other things being equal.

SECTION 14

The SNP Target Scenario

- The SNP sees the Scottish national debt as being small, in GBP and costing perhaps just a few basis points more than gilts
- It envisages converting the GBP into a pseudo-EUR where Scotland benefits from the benchmark rate set by the bigger nation(s), but pursuing its divergent taxation, economic and social policies – just the strategy of Greece, Cyprus, Ireland, Spain, Italy, Ireland
- This vision does not work on many levels

Why does the SNP want to keep the GBP and keep its national debt in GBP? That's easy: to gain a benefit from not finding out what world markets think of its independent ESL currency, or of its credit rating, in terms of either a much higher benchmark cost-of-funds in ESL than applies to gilts in GBP, or of a large credit premium for Scotland's bonds in GBP compared to gilts.

The dream scenario for the SNP would be for Scotland to inherit its debts on the UK's terms and then in the long term for Scotland's bonds to trade off the gilt yield curve, the all-in cost being subsidised by the economic power of The Rump, the population of The Rump, and the standing of GBP as a reserve currency.

The SNP would hope that Scotland's bonds would trade at maybe a very few basis points yield premium over gilts, in just the same way as Greek, Italian, Irish, Spanish and Portuguese bonds traded at low spreads above German Bundesanleihe in the heady days when EUR membership was thought to involve mutual support on Balance of Payments deficits, and before international investors saw through the Stability & Growth Pact to understand that they were exposed to the individual capacity to pay of each Member State individually i.e. to their individual credit rating.

The SNP is thus hoping to shield Scotland's individual credit rating behind that of The Rump and take a free ride on The Rump's coattails.

If that is the plan, Scotland should at least have offered to pay The Rump an annual credit insurance premium to account for the risk of damage to The Rump's currency and bond market if Scotland were to default, and to compensate The Rump for its costs in creating and maintaining a market out of which Scotland can draw funds as a quasi-domestic issuer, rather than having to issue GBP bonds as a foreign issuer, like Her Majesty in the Right of Canada or the Republic of France. Without such a consideration Scotland would be getting value without payment.

If that is the plan it is impractical anyway: the conversion cannot be done without an operation that exposes Scotland's credit rating.

It is not possible to achieve it via a redenomination as used for EMU joiner countries to change their government bonds into EUR as of 1/1/1999.

The plan to keep GBP as the working currency similarly aims to avoid the difficult issue of redenomination of banks accounts. When countries joined the Euro all assets and liabilities of banks in French franc, Belgian franc, Dutch guilder etc were redenominated into EUR: the legacy currencies existed for 3 years as a version of the EUR but then disappeared. Were Scotland to try this with GBP accounts in Scotland and redenominate them into ESL, the account-holders might simply move their GBP balances offshore – because the GBP would still exist.

Unlike the legacy EUR component currencies, GBP would still be a Member State currency of the EU and it would not be possible for a Member State to seize a citizen's bank balance in a non-bankrupt bank and forcibly alter it into another currency. Nor should it be possible for the Member State to introduce currency controls and stop the owner moving the money to another country.

Cyprus has introduced exchange controls, and has made certain depositors take a haircut on their deposits with a bankrupt bank: where the deposit amount exceeded the deposit insurance scheme ceiling.

Establishing a financial markets framework for Scotland – even if it stayed with GBP

To remain in the EU and to not immediately be ranked with Cyprus, Scotland would have to eschew such measures, and instead implement the following as a bare-bones framework for a financially viable country even were it allowed to retain the GBP:

Subject	Action
Scottish central bank	To be established as prime regulator of Scottish banks and holder of Scotland's currency reserves, and to issue Scottish note and coin
Deposit insurance scheme	Establish such a scheme with a ceiling of at least GBP85,000
Size of domestic banks	To be not so large that they weigh down the Scottish economy if they run into trouble
Foreign interests of domestic banks	The Scottish central bank cannot be the prime regulator called upon to stand behind, for example in the case of RBS, NatWest in England and Wales, Ulster Bank in Ireland and Citizens Bank in the USA
Scotland's currency reserves	5/63rds of UK reserves
Payment systems	Scotland would want to retain access to UK payment systems, but the Bank of Last Resort to those systems is the Bank of England
Payment system access	Scottish banks could not be allowed to be main clearers in order that the payment systems not be exposed to country risk (on foreign countries) Scottish banks should access the systems only through the Scottish central bank. That is the way the TARGET EUR system is built: central banks buffer the risks between the respective banks over which they are prime regulator
Payment system collateral	The Scottish central bank would have accounts at the Bank of England and be the settlement agent for the Scottish banks: it

	would have to post collateral to immunise the Bank of England against risk since central banks are not allowed to run credit risks, even on other central banks. Again, that is how the TARGET system works in EUR
Payment system collateral currency	The collateral must be in GBP
Payment system collateral quality	The collateral must be in "central bank money", which is credit risk-free because it is an obligation of a government in its own currency.
Forms of "central bank money" in GBP	Now: • Credit balance on an account at the Bank of England (which can only be in GBP) • GBP note and coin issued by the Bank of England • UK gilts After Scottish independence: • Credit balance on an account at the Bank of England • GBP note and coin issued by the Bank of England • The Rump's gilts

Note the anomalies in "central bank money":

- Scottish banknotes issued by Clydesdale Bank, Bank of Scotland and Royal Bank of Scotland now only counts as "central bank money" because the banks have to hold a credit balance on an account at the Bank of England pound-for-pound in the amount of notes issued: they have to back their non-central bank money with actual central bank money
- After independence this arrangement would cease and Scotland would have to make its own arrangements for banknotes and coin: the Bank of England would not be allowed to accept the Scottish banks as counterparties any longer, and would have to shut down the above arrangement
- Scottish banknotes would be an issue between the Scottish central bank and the Scottish banks
- Government bonds of an independent Scotland would not be acceptable to the Bank of England as central bank money, because Scotland would by then be a foreign government
- Scottish bonds would be risk-free to Scottish banks and the Scottish central bank, but towards the Bank of England they are not the obligations of the Bank of England's government, and they are not "an obligation of a government in its own currency"

Of course the SNP wants the bonds to be regarded as "an obligation of a government in its own currency" and to be eligible as collateral at The Bank of England, and the model of the EUR is behind this.

As explained earlier, this turned out to be a flawed phrase; to be genuinely credit risk-free an obligation of a government must be in its own currency **of which it is the sole user**. The existence of multiple users of a currency damages the quality of the central bank money in that currency.

Allowing Scotland to share the GBP would damage the quality of the central bank money in GBP, in fact it would de-base GBP, in just the same way as the structure of the EUR has damaged the credibility of central bank money in EUR.

In fact there is no genuine central bank money in EUR other than the note&coin, much as the European authorities would dispute this – balances in individual Eurosystem central banks and bonds of Euro-in governments carry individual credit risk: there is no such thing in EUR as an obligation of a government in its own currency **of which it is the sole user**.

The best quality money is the Bundesanleihe or German government bond, or a credit balance in the Bundesbank, but that is because the markets believe Germany's credit risk is the lowest and not because of the structure of the Eurosystem: the credit risk is low, but is not risk-free, in the same way as UK gilts or US Treasury bills are now.

Curiously EUR note and coin are examined to see if they are issued by the Bundesbank or another member of the European System of Central Banks, whereas that is the one manifestation of EUR "central bank money" upon which the credit risk is collective, on the European System of Central Banks: they are jointly & severally liable for note&coin, which can be paid into any member of the Eurosystem for full value in terms of current account money.

Let us conclude this section by repeating the phrase above: allowing Scotland to share the GBP would damage the quality of the central bank money in GBP, in fact it would de-base GBP, in just the same way as the structure of the EUR has damaged the credibility of central bank money in EUR. Thus, allowing Scotland to retain the GBP creates a risk of damage to the Rump's markets in GBP.

These are really important barriers to Scotland retaining GBP as a working currency.

One could consider ways of mitigating that risk, such as Scotland placing a major portion of its bullion and currency reserves into the Bank of England, not least to collateralise Scotland's payments in GBP.

The SNP probably imagine they can post the collateral in the form of Scottish government debt but they will not be able to do this i.e. be able to get their payments away on the back of their own IOUs: the collateral for a credit line cannot have correlation with the obligor under the credit line. And Scottish debt is not "central bank money" in The Rump's eyes.

Enough said: The Rump must not allow Scotland to use the GBP because it creates a dangerous analogy to the fault lines in the EUR that the debt crisis has exposed.

SECTION 15

Implications of the SNP Target Scenario for The Rump and the final result for Scotland

- The Rump would need payment, control and collateral were Scotland to retain the GBP
- That would include joint control of the oil&gas reserves
- The payment – if it was GBP300 per annum per capita – would square the circle: what with Scotland meeting GBP1,200 per annum per capita in extra existing public spending directly, the “independence bonus” of a monopoly on oil&gas tax receipts would be completely used up
- That deal would not add up to independence but Devo-Max
- Instead independence means no GBP but ESL and/or in due course EUR, and in both cases the measures implied by the Fiscal Stability Treaty

It is unacceptable for The Rump to allow another country to continue to use the GBP, when it has sole sway over the amount and timing of extraction and sale of the oil&gas reserves. If, as the SNP claims in their prospectus, there are 24 billion barrels of proven reserves within the area that will belong to an independent Scotland, that could represent (at a price of USD90/barrel) USD2.160.000.000.000 of GDP. How much of that would be receivable as tax revenues by Scotland, in which case the Scottish exchequer (or an oil company) would sell USD against GBP, causing the GBP to appreciate.

No government of The Rump could allow a foreign government to unilaterally hold sway over its currency to that degree: if that were the deal then, as the SNP Prospectus claims, “An independent Scotland will be able to decide our currency and the arrangements for monetary policy”. Indeed - by effectively controlling the Bank of England’s monetary and interest rate policies through its unilateral weapon on the exchange rate.

Were The Rump’s government to negotiate on the usage of GBP, it would have to be on the basis of decisions about the oil&gas being shared, and of The Rump being paid a substantial annual fee for the risks to the GBP of Scotland using the GBP and benefiting from its association with credit rating of The Rump – which in other words comes down to a share in the oil&gas tax revenues.

An agreement to retain the GBP, if it included protection from Country Risk for The Rump’s pension & investments assets and certain protections around The Rump’s government work done in Scotland, might perhaps mean that the drop in GDP and concomitant tax revenues can be avoided.

If, under such a scenario the fee for Scotland’s continued usage of the GBP were to be GBP300 per capita per annum, then the circle is squared:

Item	Item amount (per capita per annum)	Running Total
Result of monopoly on oil&gas tax revenues	GBP1,500	+ GBP1,500
Paying for current public expenditure per capita that is in excess of UK	-GBP1,200	+GBP300
Fee paid to The Rump for using GBP	-GBP300	0

This is not independence; it is interdependence, or indeed Devo-Max to use the popular phrase.

In other words it is being part of the UK, more or less the status quo and what results from a 'No' vote in the referendum, albeit that the money mainly flows through the Westminster accounts.

This scenario adequately protects The Rump's interests as well, in the current status quo.

However under the independence scenario, the 'Yes'vote (where Scotland does not use the GBP, need not pay such a fee, and there are no protections around pension&investment funds and government work), we revert to the base scenario for Scotland in which The Rump's interests are also protected, due to complete separation as foreign countries:

Item	Item amount (per capita per annum)	Running Total
Result of monopoly on oil&gas tax revenues	+GBP1,500	+ GBP1,500
Loss of GDP and concomitant tax revenues from re-homing of The Rump's pension&investment funds and government work, disproportionate PFI etc…	-GBP1,000	+GBP500
Paying for current public expenditure per capita that is in excess of UK	-GBP1,200	-£700
Paying for extra public expenditure per capita as promised in the SNP Prospectus	-GBP1,000	-£1,700
Higher interest rate cost on public debt of minimum GBP350 million per annum	-GBP66	-£1,766

Please note that, although these numbers are expressed in GBP, they would not actually be in GBP but in whatever currency Scotland was using, which would most likely be ESL and then sooner or later EUR.

A deficit of GBP1,766 per capita per annum, with 5.3 million inhabitants, adds over GBP9 billion per annum to public debt. On a GDP of around GBP143 billion, that would cause the debt-to-GDP ratio to deteriorate by 6% per annum.

Foreign investors would shun the currency of the country where this was happening, and it is no solution to join the EUR and imagine such policies can be perpetuated.

Instead the government of the country of that currency would have to take tax-positive measures:

- Extract more oil&gas more quickly
- Make non-oil&gas businesses sell more (how? who to?)
- Increase corporation tax
- Increase personal taxes
- Cut spending

Were Scotland within the EUR it would be compelled to take the same measures in order to comply with the Fiscal Stability Treaty.

So all roads lead to Rome – no GBP and a need to radically revise taxation and spending plans whether Scotland has its own currency or EUR. Only by hanging on the coattails of The Rump by continuing to use the pound can these measures be avoided: that is the real message of the SNP Prospectus.

But there is only one way to continue to use the pound: vote 'No'.

There is no convenient loch where Scottish independence and the pound can coalesce: Scotland cannot have its cake and eat it.

SECTION 16

Summary and Conclusions

- Independence means no GBP, no big bonus from oil&gas tax revenues, a substantial national debt of at least 71% of GDP, and a number of substantial risks on GDP and tax revenues…
- Plus the need to establish an independent currency and then join the EUR – necessitating a rebalancing of debt-to-GDP
- There is another option, of course, and quite a good one

The SNP Prospectus fails to make a case that Scotland has an engine for GDP growth apart from oil&gas. Even the oil&gas engine is just arithmetic; Scottish GDP goes up if the oil&gas extraction is included, but that does not deliver substantially more tax revenues to Scotland is getting now: GBP1,500 per annum per capita would come direct, but GBP1,200 per annum per capita would have to be paid out direct.

To set against that, factors such as the re-balancing of the public sector workload and the pensions & investment industry to Scotland's detriment, PFI, the cost of disentanglement, the reduction of Corporation Tax could plausibly cost Scotland GBP1,000 per annum per capita: then there is no "independence bonus" at all.

Next you have the SNP's incremental spending promises in the First Budget and their First Term as government of an independent Scotland, and finally on the spending side, the facts of an ageing population and healthcare needs to which the IFS refer.

This study puts a figure of GBP1,000 per annum per capita as the costs of the SNP's incremental spending under the First Budget and their First Term, but does not adjust these figures further for the issues of ageing population and healthcare needs.

That is an adjustment factored into the EUR Member State Fiscal Stability Treaty: governments must first see that they reduce debt-to-GDP to 60%, and then must further adjust their plans (taxation up/spending down) to anticipate age-related costs up to 2050.

The SNP Prospectus avoids any discussion of these important matters. Admittedly if in the best case Scotland goes into Day Zero in 2016 with a 71% debt-to-GDP ratio, the last thing the SNP wants to acknowledge is that debt will probably have to be brought down by 11% of GDP before 2030 i.e. no increase in the First Budget or First Term but actually a cut of nearly 1% per annum for 13 years, or nearly GBP14,000,000,000 per annum.

The SNP's 'impossible dream' scenario of a softly-softly GBP debt takeover is the only one in which Scotland might avoid being forced to face up to this conundrum on Day Zero and exposing itself to the historic judgment of international debt markets by actively launching its own bond issues, and risking a higher cost of debt servicing.

The idea of having the GBP as Scotland's currency and Scotland's national debt in GBP is aimed at avoiding this exposure at Day Zero, but it is impossible legally and technically. It cannot just take over UK

liabilities on the same terms and conditions as their original issuance. The investors will not stand for it, and The Rump should back them.

Scotland would either have to re-issue current gilts but under its own name, issue its own GBP bonds in the same amount, or go with EUR or its own currency, and issue its own bonds in either of those. In all scenarios the obligor name “Scotland” has to be exposed to the gaze and judgement of international investors.

These options all have fatal flaws, or cause as many risks as they solve, or else are unacceptable to The Rump: this last point knocks out all the options where Scotland has GBP as its working and debt currency. Scotland cannot keep the pound.

No country can have a different debt currency from its working currency, so there is no in-the-middle position of Scotland having its debts in GBP but using a different currency as its working currency.

Which brings us back to the EUR, towards which the ESL – Scotland’s own currency – would be a stepping stone.

The most plausible scenario for Scotland issuing its own debt is if it were in the EUR, issuing in an established reserve currency backed by the framework of EMU. The EUR offers a lower benchmark cost-of-funds than GBP. By issuing in EUR and adding its own credit premium to the benchmark, Scotland might still achieve a very similar all-in-cost than it does today.

However, that only works if the EUR was also Scotland’s currency: if it were not, Scotland would be taking on a massive and destabilising currency risk. So Scotland should join the EUR in order to have the best chance of matching the current all-in-cost of debt servicing.

But then it would have to embark on austerity until 2050 to bring debt-to-GDP down to 60% while cutting early to take account of increasing age-related costs.

To sum up, the SNP has left itself with two options:

1. Face much higher servicing costs on the national debt of an independent Scotland in the ESL currency, and a higher national debt as well: considerable on Day Zero, and more likely to rise than fall thanks to existing trends and the SNP’s spending mission; or
2. Keep debt-service costs capped and then on a downward path by joining the EUR, issuing the national debt in that currency, and abiding by the Fiscal Stability Treaty.

The latter option is cyanide for the SNP, the former polonium for Scotland. The difference is in the time needed for the victim to decease, and, in this case, who the victim is.

Luckily for the Scottish people, they do not need to choose either option. Instead they have an exciting trump card up their sleeve:

- keep GBP as the working currency
- have debts denominated in GBP
- enjoy the all-in-cost of funding through gilts thanks to GBP being a liquid reserve currency and to its owner being a AAA-rated name
- benefit from the assurance that Scottish debts are underwritten by the rest of the UK (in exchange for which Scotland has to reciprocally underwrite the rest of the UK's debts)
- continue to discharge a disproportionately high share of the UK public sector workload in exchange for money
- carry out a disproportionately high share of the UK pension and investment management workload also in exchange for money
- enjoy benefits in terms of public spending that derive from economic growth wherever it occurs within the UK

That's a 'No' vote then.

BL/16.1.14