The CAG is broadly correct about the undue benefit to a select few but hurts its own credibility when it doesn't do some basic checks like discounting revenue streams

If there is no production, as the government has said, how can there be any loss from the coal mines allotted? After all, the coal remains in the ground.

This presumes the government is going to, as in the case of the 2G licences, cancel the mines allotted. If, however, the mines aren't going to be de-allocated, the profits will be made when the mining is done. The CAG was simply doing an exercise in what the losses were likely to be; whether the mining is done or not is irrelevant.

How did the CAG arrive at the R1.86 lakh crore undue benefit figure?

It took the profits per tonne (R295.41 per tonne) of coal of Coal India Limited and multiplied this by the amount of coal in the mines allotted to companies.

Is this the correct way of doing it?

Not really, given Coal India may or may not be the most efficient producer of coal. So, if its profit is less than that of a private sector firm, estimating the losses based on Coal India's profits will give you a huge underestimate—captive coal costs a third or so less than what Coal India coal costs and, therefore, is more profitable.

But wasn't the figure R10.8 lakh crore in the draft report? How did the CAG arrive at a lower figure in the final report?

That's correct, it was R10.8 lakh crore. The CAG came to the lower figure by making some assumptions. It removed the coal allotted to public sector firms, for instance. Of the total of 36.97 billion tonnes of geological reserves in the 142 mines allotted since July 2004, around 22.45 billion tonnes was given to government firms. This brought the losses down to R4.24 lakh crore.

Is this methodology correct?

Not at all. In the 2G report by CAG, the losses due to the 'extra' spectrum given to the PSUs MTNL and BSNL, in fact, were much larger than those given to private sector firms like Bharti Airtel and Vodafone. The reason for including PSUs is that when they are privatised, or their shares sold, the amount of 'loss' can't then be recovered. If nothing else, CAG should have included the PSUs for the sake of consistency.

How did it then move from R4.24 lakh crore to R1.86 lakh crore?

It did this in two steps. In the earlier report, CAG incorrectly assumed that all the 36.97 billion tonnes of coal could be mined. As the Coal India results show, this is not true—of the 52.5 billion tonnes of 'proven' reserves with Coal India (another 12.2 billion is 'indicated' and 'inferred'), its draft red herring prospectus says, only 21.7 billion tonnes is extractable. In the final CAG report, a figure of 37% extractable-to-total reserves is assumed for some mines where the mining plans are not available. Where they are available, a figure of 73% has been taken. The CAG then assumes that there are no profits to be made in the mines where underground mining has to be done. Once you do this exercise, you come to a figure of R1.8 lakh crore. The report says upfront that the losses only pertain to private sector mines, and the open-cast ones at that.

Is excluding underground mines correct?

No, it isn't. The reason why the CAG did this was because Coal India makes no profit on underground mines. But just because Coal India doesn't make profits doesn't mean these mines are not worth anything. The reason why the CAG did this was because the coal controller told it the underground mines were not profitable. This method then lowers the estimates of loss.

Is this the correct way of calculating the loss to the exchequer? And aren't these just presumptive losses?

It is presumptive since the calculations are based on various assumptions. Had there been an auction, there would be no need to make assumptions. But since there was no auction, you have to simulate conditions to find out what-if. Economists call this opportunity cost, and it is a perfectly legitimate way to calculate losses.

Is there a better way of doing the calculation?

In the 2G case, some of the companies A Raja benefited decided to go and induct new partners. Based on the values these new partners paid, the CAG came to a true value of the spectrum. Around the same time the 2G report was being worked on, the government came out with its 3G auction and this then gave another R/MHz figure for what the spectrum was worth.

Wasn’t this biased since 2G and 3G spectrum are, in the words of A Raja, as different as PDS rice from basmati rice?

That’s not true since telcos can offer any type of service—voice, high-speed data, video—on any type of spectrum. But the real reason for the CAG using the 3G figure—which gave it the R1.76 lakh crore loss figure—was that Trai itself said the 3G bid price would be the value taken while calculating what telcos had to pay for the ‘extra’ 2G spectrum they held. This is also the formula used by Trai now to calculate the reserve price for the forthcoming 2G auctions. So, the CAG’s R1.76 lakh crore loss estimate for 2G has largely been vindicated.

Since there were no sales of the coal blocks, how can this method apply?

There were reportedly some sales, and the CBI is investigating these. Had we known the details of the values at which these sales took place, it would be easy to arrive at a loss in the way the CAG did in the 2G case. But there are other ways of estimating the loss as well. Coal India is a listed company with a market valuation. The CAG could have examined its market valuation and come to a per tonne of reserves valuation. Similarly, Indian firms like Adani, Lanco and GVK Power have bought coal mines overseas. Based on these, you get a loss figure that ranges from R1 lakh crore to R5 lakh crore, but that’s assuming all the 36.97 billion tonnes of coal can be mined.

But these gains/losses would have accrued over 20-30 years, wouldn't they?

That's right. For some reason, the CAG didn't discount the gains in the coal report though it did in the Sasan and DIAL reports. In the case of Sasan, it said the undue benefit was R29,033 crore and then said this equalled R11,852 crore on an NPV basis. In the case of DIAL, it said the R88,337 crore benefit to the private promoters of DIAL worked out to R4,187 crore on an NPV basis. Once you do the discounting in the coal case, the actual loss would be 40% or so of what the CAG has estimated.

The need for discounting applies to the calculations based on Coal India's profits per tonne of coal. If you do the calculations on the basis of Coal India's market value or the price paid by Indian firms for buying foreign coal mines, you don't need to do any discounting.

So, did the CAG get the number right or not?

Difficult to say since it has underestimated in some cases (by taking Coal India's profits as the base, by looking at only open-cast mines, by removing PSUs from the list) and overestimated in others (by not discounting).

But if the coal is being used to produce power at a lower cost, where's the loss?

If consumers got cheaper power as a result, that would be true. But firms who got captive coal blocks were selling power at a 200-300% profit in the power trading market. So, consumers didn't benefit, the companies that got the captive coal blocks did. These were roughly 1,400 applicants out of which just 142 got chosen based on, what the CAG says, a procedure that "lacked transparency and objectivity".

What if those power producers who got captive coal blocks were told to sell power only through competitive bids as the power ministry has now directed?

We should wait and see if the power/coal ministry actually enforce this notification, and for how long this is done. Chances are it will be junked at some point. More important, however, this still gives an unfair advantage to the firm that has a captive coal block. If company A has a capital cost of R1 per unit of power and buys coal from Coal India at 85 paise per unit of power, it will bid R1.85 per unit of power in a competitive bid. If company B which has a captive block, however, finds it has a coal cost of 50 paise and the same capital cost, it can bid R1.80 per unit of power in a competitive bid and still make a killing. But all said and done, if those with captive coal blocks are forced to sell all their power only through competitive bids, this will recoup a large part of the losses.