INFORMED SOURCES September 2023

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Making sense of the passenger railway's post-pandemic recovery is handicapped by the intermittent reporting of financial and ridership data – usually at least three months out of date. But this month I have some current statistics to work with. The second item is an in-depth look at a recurring topic in the column – signalling renewals costs. Finally I introduce a new feature.

Passenger revenue recovery stabilising

Has signalling lost the plot?

Captain Deltic's notebook

When charting the recovery of the railway's fortunes from the impact of the pandemic it seems that every silver lining must have a cloud. Take, for example, the impact of inflation on comparisons of current revenue with pre-Covid.

For the first three periods of the current financial year, from 1 April to 28 June, official data shows that fares revenue was back to 90% of the same period in 2019. But that is before you allow for four years of inflation.

When you adjust for inflation, applying the Consumer Price Index (CPI), that percentage falls to 78%. Even worse, when you compensate for the recent addition of the Elizabeth line's revenue to the 'main-line railway,' total passenger revenue is at 73% of pre-Covid levels.

In the column I analyse the changes in ridership and revenue between the various fares categories and also across the classic passenger business categories. In particular leisure travel (advance and off-peak) currently generates half of the railway's fares revenue. In addition to fares income, yield and load factors suggest that Intercity, aka 'Long Distance,' is where the serious money is to be made, despite the high proportion of discounted Advance ticket sales.

From this current data, it has become clear, at least to me, that we should now stop making comparisons with the commercial performance of the railway before Covid. So much has changed since 2019-20, that comparisons tell you little. The passenger market has changed radically, as has the national economy.

And, it looks as though we now have stable baseline from which to advance and create a 'new normal' for the railway. My recent financial analyses have all come to the same conclusion: the railway can't cost-cut its way to sustainability, making the only way out of the current crisis is to go for growth.

At last, this seems to have sunk in at the DfT. TOCs have received an 'Early engagement Business Planning Request' from DfT for 'new initiatives that can be implemented in 2024-25 that reduce net subsidy in 2024-25 and 2025-26 on top of the current Quarter 2 2023-24 forecasts'.

Ground rules for these initiatives naturally start with their ability to reduce 'variable or discretionary spending' but may also increase costs provided these are offset by even more revenue. Progress at last!

More on signalling costs

Back in the April Modern Railways, I reported that an article on the Marches Line in the February issue had me reaching for my calculator. To recap, according to Network Rail, resignalling the 51.5mile Marches line, with its 15 manual signal boxes between Little Mill Junction and Severn Bridge Junction at Shrewsbury, would cost £116 million and was deemed unaffordable. This seemed very expensive.

Naturally I followed-up the cost with Network Rail's Wales Route and their helpful press team came back with the latest 'hypothetical' numbers. Apparently the resignalling would now cost £146m. Without Severn Bridge Junction the cost estimate falls to £123m. And the cost doesn't include level crossings – say £1milion a throw if outside a station signalling area.

This raw data came with a caveat. The figures were purely an output from Network Rail's cost model and based on SEU volumes and category of work. They would provide the starting point for the business planning process and could go up or down, as the actual scope was developed.

Signalling unit costs are calculated per Signalling Equivalent Unit (SEU). An SEU is an item of signalling equipment such as a signal post or point-end. So, the positive news is that the 'hypothetical' cost per SEU has come down to £423,000 compared with over £800,000 in my April analysis.

Even so, this is around the top of the cost range for conventional signalling quoted in Network Rail presentations to prove that ETCS is the only affordable way forward. North Wales Coast resignalling was delivered for around £270,000/SEU, even after Network Rail's associated works were added to the signalling contractor's costs.

In the column, analysis of the current signalling market leads into a review of the role of the Office of Rail & Road (ORR) in signalling costs. This goes back to an ORR signalling review in 2005 which reported that Network Rail was assuming that the cost per SEU would reduce by 30% between 2004-05 and the end of Control Period 3 in March 2009. ORR's 'view' was that, while a 30% reduction in unit costs represented a 'significant improvement in efficiency', Network Rail should be able to achieve further efficiency gains on signalling renewals over the same three years.

Well, those were the aspirations. What happened next?

According to ORR, between Control Period 4 (2009-2014) and Control Period 5 (2014-19), Network Rail's unit costs for re-signalling work increased, in inflation adjusted terms, by 77%.

Clearly, signalling costs were out of control. Something was wrong and this could only be attributed to the lack of competition. So in January 2020 ORR launched a new Market Study.

Though delayed by the pandemic, this study duly came up with various recommendations for increasing competition in the supply chain. This was full of stuff about encouraging new entrants to challenge the current major contractors – Alstom and Siemens, with innovative products, and so on.

Network Rail's main response to the Market Study was to change its approach to procurement from Control Period 7 (2024-29) onwards. The first manifestation of this policy change will be Network Rail's new Train Control Systems Framework (TCSF).

TCSF is a programme for the procurement of major signalling renewals and enhancements in CP7 and CP8. It splits procurement into two lots: one for conventional signalling the other for what ORR, infuriatingly, insists on calling 'digital' but, out on the real railway, we call ETCS. Each lot will be allocated four framework suppliers.

What ORR has overlooked in its enthusiasm for competition is that railways in Britain have their own unique signalling principles and regulations. I can recall Siemens, before it acquired Invensys, telling me about the problems of adapting the logic in its European-based interlocking to UK principles for the Bournemouth resignalling.

So, while ORR's much touted 'new entrant' may have an innovative, much cheaper, interlocking, it is going to need experienced UK principles testers to manage the transition to the UK network. And these are a rare breed, requiring years of experience.

How is a newcomer going to provide this expertise? Only by poaching from the current UK contractors.
On one recruitment website I found over a dozen signal testing jobs listed – including advertisements from Alstom and Siemens. You might have expected the 'Big Two' to be fully tooled up already, seeing that Network Rail has, reportedly, 28 major signalling projects to commission before the end of CP6 – or 31 March next year in normal-speak.

ETCS

I conclude with an update on the European Train Control System (ETCS), widely seen, except in Scotland, as the way out of the cost per SEU trap. At this early stage the ECML (South) resignalling is seeing costs per SEU in the £220,000-£280,000 range, but is confident that this will fall, as contractor Siemens gets into its stride.

But what should drop into my in-tray a few weeks back, but a press release headed 'Thameslink fleet set for additional digital upgrade.' Wasn't the Class 700 fleet supplied as ETCS-ready?

I was expecting just a software upgrade. But it's a £32.7m contract to upgrade the Class 700 fleet to the latest ETCS specification, including both software and extensive hardware modifications. So an ETCS-ready train fleet has gone from cutting edge, when I travelled under ETCS through the Thameslink Central core in 2018, to obsolescent. The cost of this upgrade would have more than covered the North Wales Coast conventional resignalling.

Captain Deltic's Notebook

Each month, while I'm writing the next column, new information emerges which does not fit into my current work and goes into the Informed Sources pending file for potential inclusion in a future article. However, some of these items would be of immediate interest to readers, so this month sees the first appearance of what I am calling, for lack of s snappier title, 'Captain Deltic's Notebook.

It covers two topics, Network Rail's consultancy costs in 2021-22 and a look back at the cost of Network SouthEast's Chiltern Line total route modernisation in the 1980s. This latter was triggered by an article on the future role of the private sector in the July Modern Railways and some subsequent correspondence.

Roger's Blog

I think it's fair to say that all of us at Modern Railways were surprised by the strength, and length, of the public reaction to the announcement that consultation was starting on the intention to close ticket offices. The scale of the response has resulted in the consultation period being extended to 1 September and, as I was writing this, the number of responses had passed the 300,000 mark and still climbing.

In an attempt to disguise its central role in the decision, the Department for Transport delegated implementation of its closure programme to each train operator to develop independently. This meant that an operator serving a station run by another operator would not have known what the proposal for that station would be until the same time as the rest of us – when the consultation went public. Result: a top-grade shambles, which is going to run and run.

Meanwhile, with Great British Railways unofficially off the agenda, for next month I thought it might be enlightening to revisit the Williams-Shapps Plan as a reminder of what was supposed to happen. But before that there's the Scotland Strategic Business Plan to analyse.

And everyone is getting very excited about several train operators issuing invitations for manufacturers to pre-qualify to supply unfeasible qualities of new rolling stock. My reaction is 'curb your enthusiasm,' with some analysis and market context-setting overdue.

While I haven't written about human factors in the driving cab for some time, various concerns have emerged recently. Given time and space in the column that is another topic to investigate.
So, despite August being seen as a quiet season for news, as ever, 'the railway makes work for idle hands.

And do let me have your feedback on 'Captain Deltic's Notebook.' E-mails to roger@alycidon.com are always welcome.

Roger