

# SPECIAL REPORT

Economic Bulletin



October 2003

## Railway cost driver analysis

**Franklin + Andrews has developed a unique set of indices to reflect both cost and tender price movement of railway construction.**

Analysis and discussion with leading specialists within the sector established a need for the indices. The indices are offered as an alternative to the existing use of the Retail Price Index (RPI) to inflate and deflate project budgets. A regular review and updating of the indices with forecasts for future cost and tender movements will be published on a half yearly basis.

### Cost Components

The following were established as being typical of cost significant components of major railway projects.

- Signalling
- Telecommunications
- Electrification
- Permanent Way
- Stations and Civil Engineering

Through use of weighting existing public domain indices for

historical movements and linear regression techniques for predictions, cost indices have been created for each of the five components from a base year of 1995. These indices have been weighted to replicate a typical major infrastructure project in order to generate a Railway Project Cost Index.

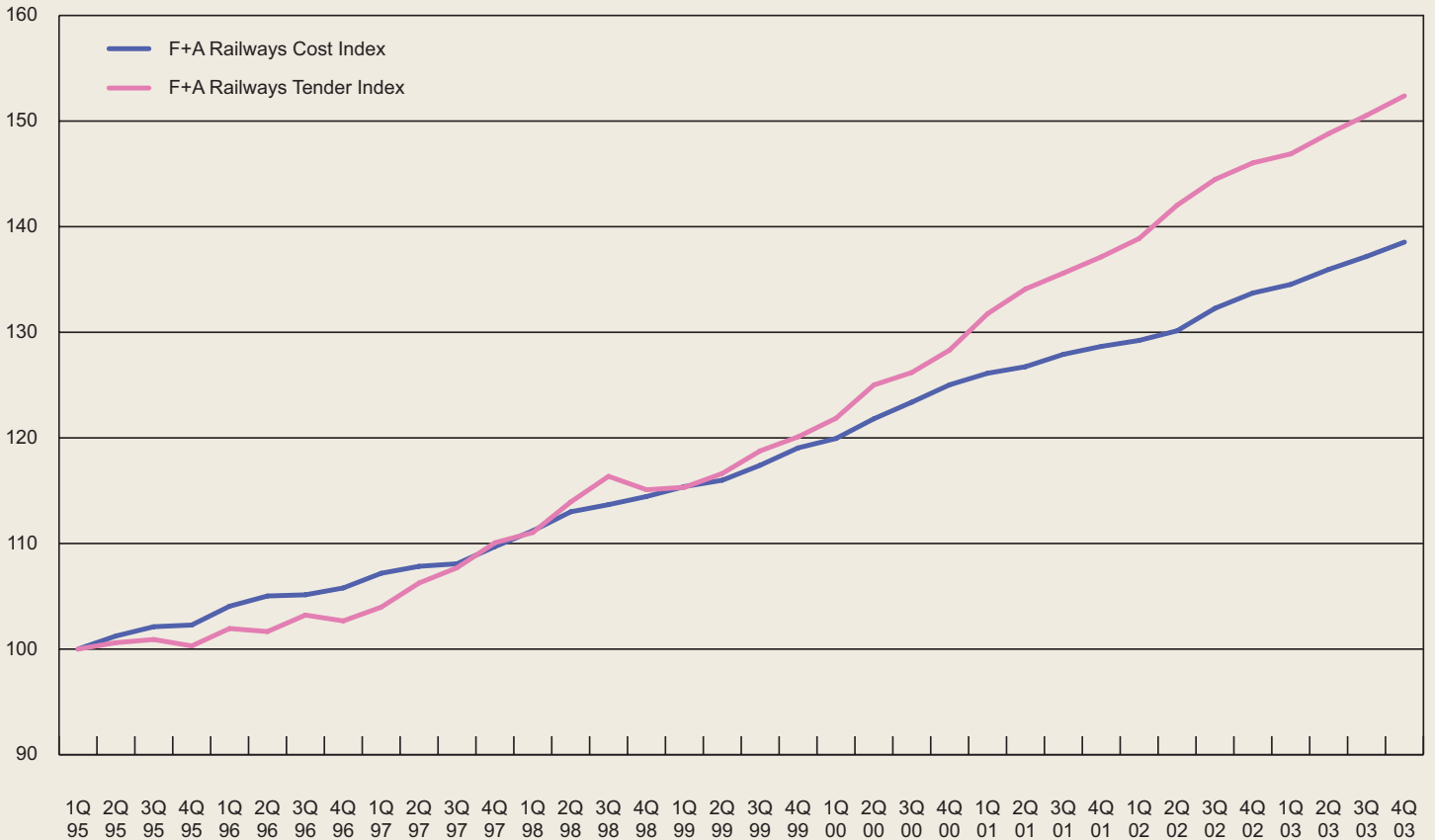
As a number of the cost components are subject to market forces, a series of tender indices have also been included. These tender indices have been weighted to produce a Railways Project Tender Index.

Cost Indices													
	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03
Signalling	135.38	135.28	135.59	127.17	136.54	137.01	137.48	137.96	138.43	138.91	139.38	139.86	140.33
Telecoms	133.00	132.94	133.16	133.53	133.90	134.27	134.65	135.02	135.39	135.76	136.13	136.51	136.88
Electrification	133.00	132.94	133.16	133.53	133.90	134.27	134.65	135.02	135.39	135.76	136.13	136.51	136.88
Permanent Way	137.14	136.60	137.38	137.89	138.39	138.90	139.40	139.91	140.41	140.92	141.43	141.93	142.44
Stations and Civils	132.77	132.41	132.82	133.30	133.79	134.28	134.76	135.25	135.73	136.22	136.71	137.19	137.68
<b>Typical Railways Project Cost Index</b>	<b>133.00</b>	<b>132.94</b>	<b>133.16</b>	<b>133.53</b>	<b>133.90</b>	<b>134.27</b>	<b>134.65</b>	<b>135.02</b>	<b>135.39</b>	<b>135.76</b>	<b>136.13</b>	<b>136.51</b>	<b>136.88</b>

Tender Indices													
	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03
Signalling	133.31	134.26	134.43	137.44	137.81	137.77	138.15	138.69	138.68	139.69	141.94	142.08	142.92
Telecoms	131.28	132.03	135.29	138.55	138.89	138.69	139.12	139.68	139.62	140.66	141.06	141.16	142.05
Electrification	131.28	132.03	135.29	138.55	138.89	138.69	139.12	139.68	139.62	140.66	141.06	141.16	142.05
Permanent Way	135.83	136.33	135.23	137.32	137.02	137.10	137.65	138.28	140.90	141.87	142.51	141.92	141.90
Stations and Civils	130.33	130.73	130.14	132.05	132.18	132.33	132.88	133.69	135.61	136.37	136.91	136.47	139.66
<b>Typical Railways Project Tender Index</b>	<b>130.43</b>	<b>131.06</b>	<b>131.76</b>	<b>133.80</b>	<b>134.01</b>	<b>134.10</b>	<b>134.52</b>	<b>135.01</b>	<b>135.60</b>	<b>136.39</b>	<b>137.17</b>	<b>137.14</b>	<b>137.58</b>

Base Jan 1995 = 100

# Railway cost driver analysis



Cost Indices Annual Inflation							
	2002	2003	2004	2005	2006	2007	2008
Signalling	4.39%	4.15%	3.02%	3.48%	3.41%	3.32%	3.23%
Telecoms	2.46%	3.32%	2.70%	2.82%	2.74%	2.66%	2.59%
Electrification	2.46%	3.32%	2.70%	2.82%	2.74%	2.66%	3.59%
Permanent Way	6.90%	4.35%	2.99%	3.69%	3.62%	3.52%	3.43%
Stations and Civils	7.24%	4.37%	3.87%	4.05%	3.98%	3.89%	3.81%
<b>Typical Railways Project Annual Cost Inflation</b>	<b>4.20%</b>	<b>3.98%</b>	<b>3.25%</b>	<b>3.39%</b>	<b>3.31%</b>	<b>3.22%</b>	<b>3.14%</b>

Tender Indices Annual Inflation							
	2002	2003	2004	2005	2006	2007	2008
Signalling	6.48%	6.23%	5.40%	5.68%	5.49%	5.28%	5.10%
Telecoms	4.45%	4.21%	4.95%	4.69%	4.51%	4.33%	4.18%
Electrification	4.45%	4.20%	4.75%	4.61%	4.43%	4.26%	4.11%
Permanent Way	9.00%	5.67%	4.75%	5.45%	5.28%	5.07%	4.89%
Stations and Civils	9.36%	6.13%	5.65%	5.93%	5.75%	5.55%	5.37%
<b>Typical Railways Project Annual Tender Inflation</b>	<b>5.72%</b>	<b>5.02%</b>	<b>4.74%</b>	<b>4.80%</b>	<b>4.65%</b>	<b>4.49%</b>	<b>4.35%</b>

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