Rolling stock market in ASEAN

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Agenda

1. Mega trends and issues
2. The projects
3. Types of funding
4. How will the Luxembourg Protocol help?
5. Issues for enforcement of credit
### Five megatrends impacting the public transport sector

<table>
<thead>
<tr>
<th>Rapid urbanisation</th>
<th>Demographic change</th>
<th>Technological advances</th>
<th>Climate change &amp; Resource scarcity</th>
<th>Shift in global economic power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urbanisation is leading to a shift from rural to urban areas and the development of mega cities.</td>
<td>Ageing population leads to increased leisure time. Growing middle class leads to increased propensity to travel.</td>
<td>Technological advancement improves the quality and efficiency of public transport.</td>
<td>Railways seen as more sustainable due to lower emissions, reduction in congestion and more efficient use of land.</td>
<td>The balance of economic power is shifting, with developing economies catching up fast with developed markets. China is one of the key drivers and funders of investment and a key supplier of technology.</td>
</tr>
</tbody>
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### Issues for financing public transport in ASEAN

The concept of PPP not understood in many markets
Government often prefers the simplicity of budget funding
Domestic capital markets too shallow/long tenors not available
Availability of soft development finance/tied aid distorts decisions

Business cases often don’t stack up and may not be well prepared
Transport planning is not well developed/many countries have no transport strategy
Transport integration is not well understood and networks not well developed
Quality gap between public and private transport is wider than in Europe
Overview of ASEAN rolling stock market – types of procurement

State railway passenger stock (dependent on government/aid funding)
State railway cargo stock – general
State railway coal and other commodity stock
Metros/LRT – new and extensions
BRT
New High Speed Rail Lines
Private commodity concessions
One Belt One Road
Smaller projects e.g. airport transit, cable cars – sometimes private
Port cranes

Recent/planned private/IFI financings of rolling stock/railway projects in ASEAN – total >USD50bn

1. High-speed Lao-China Railway
2. Thai-Chinese Railway
3. Thomson-East Coast Line
5. Hanoi Metro Rail System Project
6. Bangkok’s Orange Line Electric Rail Line
7. Kuala Lumpur-Singapore High-Speed Rail
8. Kelana Jaya and Ampang Light Rapid Transit (LRT) Line Extension Project
9. Ho Chi Minh City Metro Line No 2
Country illustration – project pipeline in Indonesia

LRTs in Jakarta, Bandung, Surabaya, Palembang – mainly operating concessions bundled with rolling stock
BRTs in other cities
Jakarta- Bandung HSR – TOD with Chinese IFI lending
PT KAI investment programme:
• Commuter rail
• Long distance passenger
• General cargo
• New coal railways
Private coal railway concessions
Jakarta airport inter-terminal railway and express railway; other airport railways
Bandung cable car

Recent/planned rolling stock procurement in Indonesia > 7000 vehicles!

<table>
<thead>
<tr>
<th>Train Category</th>
<th>Number of vehicles</th>
<th>Plan Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuter</td>
<td>100 coaches/year</td>
<td>Annually</td>
</tr>
<tr>
<td>Commuter</td>
<td>200 units old KRL, 12 coaches formation</td>
<td>2015 (Purchased)</td>
</tr>
<tr>
<td>Freight</td>
<td>50 locomotives</td>
<td>2013-2016</td>
</tr>
<tr>
<td></td>
<td>1312 flat wagons</td>
<td></td>
</tr>
<tr>
<td></td>
<td>K1 (Executive class trainsets)</td>
<td>2015-2016</td>
</tr>
<tr>
<td></td>
<td>80 K3</td>
<td></td>
</tr>
<tr>
<td>Trans Sumatera</td>
<td>6 locomotives,</td>
<td>2016-2017</td>
</tr>
<tr>
<td></td>
<td>26 locomotives, 66 coaches, 629 wagons</td>
<td></td>
</tr>
<tr>
<td>New executive class train</td>
<td>44 trains</td>
<td>Ordered, estimated finished before Eid 2016</td>
</tr>
<tr>
<td>MRT</td>
<td>16 train sets with 6 coaches each (total 96)</td>
<td>2017/2018</td>
</tr>
<tr>
<td>Locomotives</td>
<td>60 locomotives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>39 units in 2015, 11 units in 2016</td>
<td></td>
</tr>
<tr>
<td>Soekarno-Hatta Airport Railink</td>
<td>20 train set. (of each consist of 6 coaches)</td>
<td>2016</td>
</tr>
<tr>
<td>LRT Jakarta (7 corridors)</td>
<td>Each corridor will be passed by 20 trainset</td>
<td>2015 onwards</td>
</tr>
<tr>
<td>LRT Cikabur - Bogor</td>
<td>20 set</td>
<td>2017-2018</td>
</tr>
<tr>
<td>LRT Palembang</td>
<td>N/A</td>
<td>2017-2018</td>
</tr>
</tbody>
</table>
Recent fleet transactions in the Philippines

<table>
<thead>
<tr>
<th></th>
<th>LRT-1</th>
<th>LRT-2</th>
<th>MRT-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Rapid transit</td>
<td>Rapid transit / Heavy rail</td>
<td>Rapid transit/Light metro</td>
</tr>
<tr>
<td>Stations</td>
<td>20</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Opened</td>
<td>1 December 1984</td>
<td>5 April 2003</td>
<td>15 December 1999</td>
</tr>
<tr>
<td>Rolling Stock</td>
<td>BN/ACEC</td>
<td>72 Toshiba/Hyundai</td>
<td>73 ČKD Tatra RT8D5</td>
</tr>
<tr>
<td></td>
<td>Hyundai Precision/Adtranz</td>
<td>Rotem EMUs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kinki Sharyo/Nippon Sharyo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financing</td>
<td>Publicly financed</td>
<td>Publicly financed</td>
<td>Privately financed</td>
</tr>
<tr>
<td></td>
<td>* Extensions: financing from Official Development Assistance from Japan</td>
<td>*Extensions: private sector will rehabilitate the existing trains</td>
<td>- Equity: US$190m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Debt: US$ 465m, financed by BTMU, JEIXM, Postal Bank of Czech Republic, Czech Export Agency, local banks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Backed by sovereign guarantee</td>
</tr>
<tr>
<td>Track Length</td>
<td>19.65 km</td>
<td>13.8 km</td>
<td>16.9 km</td>
</tr>
</tbody>
</table>

Types of funding/financing for rolling stock

- Commercial Lease to state railway
- Senior debt/bond raised by state railway
- PPP
- Operating concession bundled with rolling stock
- Own funds of state railway
- Government grant to state railway
- Development aid
- Development loan from IFI
- Transport-orientated development (TOD)
- Use of existing rolling stock as security for new borrowing
How will the Luxembourg Protocol help the market?

- Gives lenders more leverage against state owned borrowers (thereby potentially improving terms and liquidity)
- Reduces complexity on international projects like OBOR/SG-KL HSR
- Facilitates secondary market (in a limited number of cases)
- Facilitates financing of upgrades/fleet extensions/refurbs
- Enables security to be granted in advance of delivery thereby allowing funds to be advanced at an earlier date?

BUT – it could become political – e.g. Funders could insist on ratification and countries may see this as a sovereignty issue

Issues for enforcement of credit (will Luxembourg make a difference?)

- Value in use of many fleets may be negative (dependent on PSO)
- Secondary market limited or non-existent (gauge, business case, infrastructure spec)
- Physical difficulties with repossession
- Political difficulties with repossession (especially for IFIs)
- Cost of repossession and resale
- Effectiveness of judicial system
- If the rolling stock is part of a PPP, then step in rights may be more useful – but not always politically acceptable
- Wide variety of funding/financing mechanisms