## Bills Committee on Rail Merger Bill Follow-up to meeting on 2 November 2006

## **General**

### (a) Details of synergies of the rail merger and the basis of calculation;

Synergies of the rail merger were identified via a detailed review conducted jointly by the two corporations. Each functional area common to both MTR and KCR was examined and estimates of potential savings, costs and timescales for implementation were made. The synergies identified would come from the following three areas –

- Transfer of best practice (e.g. optimal use of non-traffic hours for engineering work);
- Procurement; and
- Support functions (e.g. staff redeployment where appropriate and reduction in overheads).

The estimated synergies for each year following merger were summed up and the estimated implementation costs netted off to produce a net annual figure. It would take MergeCo a few years to realize all synergies that were identified, which would amount to about \$450 million per annum.

# (b) In what way would overseas investment of the post-merger corporation (MergeCo) affect its fares in future, in particular if investment losses were incurred by MergeCo;

The proposed fare adjustment mechanism (FAM) is a price regulation regime based on a formula which is linked to changes of consumer price index and wage index and a pre-determined productivity factor. Any overseas investment of MergeCo in future will not affect its fare adjustments in future.

## (c) Overseas experience of fare regulation, how their mechanism evolved and how it affected the operation and performance of railway services;

According to available information<sup>1</sup>, a number of cities adopt a similar

<sup>&</sup>lt;sup>1</sup> The information presented here is based on research conducted at different times in the past. We do not claim that all the information contained herein is fully up-to-date.

formulaic approach in the regulation of their railway fares:

San Francisco (Bay Area Rapid Transit (BART) System)

- BART is a 104-mile, 43-station system. Followed with nearly six years of no fare increase, BART increased its fares by an aggregate of more than 15% in 2003 and 2004.
- A fare regulation mechanism was introduced thereafter to regulate fare adjustments with a view to allowing regular fare increases.
- Fare adjustment rate = 0.5\*change in US City Average consumer price index + 0.5\*change in Bay Area local consumer price index – a pre-determined productivity factor.
- > This mechanism does not allow fare reduction.

## Singapore (Rapid Transit System (RTS))

- The Government in Singapore provides for the transport infrastructure, whereas in Hong Kong, hitherto the railway infrastructure has been funded by the railway corporations.
- Fare adjustments have been regulated by reference to a price-cap "CPI + X" formula since 1998.
- In 2005, the formula was changed to:
  Fare adjustment rate = 0.5\*change in consumer price index + 0.5\*change in average monthly earnings a pre-determined productivity factor.
- Where large capital expenditures are beyond the control of the operator (e.g. change in regulatory regime), the Government may consider providing special assistance outside the above regime to the operator.
- The fare adjustment regime allows the operator to adjust its individual fares by different rates, subject to compliance with the overall rate of fare adjustments approved by the Public Transport Council.

## Britain (Long-distance railways and London railways)

- Train operations are separated from infrastructure management. After the Hatfield accident in 2000, Network Rail took over Railtrack's responsibilities as manager of the network. Train operators pay access charges to Network Rail which also receives direct grant from the British Government.
- ➢ Fare increases were capped at the rate of change in the Retail Price Index (RPI) during 1997-1999, and at "RPI X" after 1999. A review in 2003 revealed that the "RPI X" formula was unsustainable. It was replaced by an "RPI + X" formula in 2004.
- $\blacktriangleright$  According to the conclusions of a review conducted in 2003, operators

are permitted to increase their individual fares by different rates subject to a cap at the overall fare adjustment rate plus 5%.

Japan (Japan national railways)

- Japan's national rail system began its privatization process in 1987 with the break-up of the Japan National Railways (JNR) after the company recorded huge deficit following its persistent failure to obtain approval to increase fares to fund investment and improvement programmes. Six passenger and one freight rail companies were formed to take over JNR and these companies were subsequently listed.
- An Amendment Bill was passed in 1999 and put into effect in 2000, under which approval from the relevant authority is required for upper limits on the fares, and the operators can set and revise fares on their own subject to such fares remaining below the upper limits and the operator giving prior notification to the relevant authority.

Netherlands

➢ Adopts a "CPI + X" formula

# (d) Projections of the financial performance for MergeCo for the ten years after the rail merger as commissioned by the Administration or the two railway corporations;

In structuring the merger transaction and negotiating the merger terms with MTR Corporation Ltd. (MTRCL), Government's focus was the impact of the terms on Kowloon-Canton Railway Corporation (KCRC), the travelling public, the community as a whole and the staff. It is for MTRCL management, which represent the interest of the company in the merger negotiation, to assess and consider the financial impact of the deal terms including the FAM on MergeCo.

MTRCL advised that the financial projections are price sensitive for the company and as such cannot be disclosed.

#### Fare adjustment mechanism (FAM)

(e) Illustrations in the form of a table showing the actual working of applying the permitted range for adjusting individual Controlled Fares under different situations, and factors that would be taken into account by MergeCo in finalizing the rate of adjustment to individual Controlled Fares;

MTRCL advised that competition, economic conditions and value for money are the key factors that would be taken into account in finalizing adjustments of individual fares in future. Circumstances where a different adjustment rate might be applied to some individual fares include, for example, existence of a substantial differential between rail fares and those of MergeCo's competitors, drop in rail market share following the introduction of new competing services, price cut by MergeCo's competitors, and fine-tuning of MergeCo's fare structure involving an increase or reduction in the number of stations covered in a particular fare zone.

<u>Appendix 1</u> sets out a possible scenario that would give rise to considerations to apply a different adjustment rate to some individual fares. MTRCL is preparing supplementary examples and will brief members at the coming meeting.

- (f) Justifications for providing MergeCo with the flexibility to adjust individual Controlled Fares within the range of  $\pm$  10 percentage points from the overall fare adjustment rate under the FAM, bearing in mind the FAM for franchised bus companies did not provide for such flexibility;
- (g) How the Administration/MergeCo would address the public concern that railway fares would be subject to significant changes if the proposed adjustments to individual Controlled Fares within the permitted range were allowed, and how would it be seen as fair and acceptable to the travelling public to apply different rates of fare increase/decrease for different fares within the railway network;

The FAM would allow fares to go down or up according to changes in economic conditions. On the other hand, the mechanism helps provide a stable operating environment which would facilitate MergeCo's long-term planning for its operation and investment. In formulating the FAM, we have to consider and balance the interests of different stakeholders and take into account the principle of free enterprise in Hong Kong.

As part of the overall merger package, the existing fare autonomy of the two railway corporations would be replaced with the FAM upon implementation of the rail merger. Fares of MergeCo would be adjusted according to a direct-drive formula which is linked to changes in consumer price index and wage index as well as a pre-determined productivity factor. As compared with the existing fare autonomy, the FAM would restrict MergeCo's discretion to increase its fares and mandate MergeCo to reduce fares under specified circumstances. This is unprecedented.

The overall fare adjustment rate by MergeCo would be capped at the overall fare adjustment rate derived from the FAM formula, i.e. the adjustment rate of weighted average fare of all individual fares must equal to the overall fare adjustment rate derived from the FAM formula. The FAM itself has already ensured that MergeCo would not obtain additional financial benefits even if it decided to exercise flexibility in adjusting individual fares at different rates within the permitted range. The application of different adjustment rates to different individual fares under the FAM must be revenue neutral. Further, MergeCo is required to obtain certifications from two independent experts regarding the details of individual fare adjustments to ensure compliance with the FAM before the fare adjustments could take effect.

From a practical point of view, given that railway fares are set to the nearest of \$0.1 and \$0.5 for Octopus and single journey tickets respectively, it is not practicable to require MergeCo to adjust all individual fares by the same overall adjustment rate across the board. Moreover, the fare structure of MergeCo would become very rigid in the coming years in the absence of the flexibility in adjusting individual fares within a permitted range. In the long-run, it would affect MergeCo's ability to respond to market changes and optimise the use of the railways.

The proposed flexibility of  $\pm 10$  percentage points should be compared with the fare autonomy currently enjoyed by the railway corporations which have full flexibility in adjusting individual fares at different rates. The FAM would restrict MergeCo's flexibility to not more than  $\pm 10$  percentage points from the overall adjustment rate.

Besides, the railways face keen competition from other public transport

services. MergeCo needs to be able to cope with market changes. It is therefore necessary that MergeCo should be able to retain certain flexibility in adjusting individual fares. MergeCo must take into account public acceptability of its fares, otherwise its passengers would switch to other modes which would not be in MergeCo's own interest.

In the case of adjustments of franchised bus fares, subject to compliance with the approved fare table for the relevant bus company and agreement with the Government, the bus company concerned may set and adjust their individual fares at rates different from the overall fare adjustment rate approved by the Government. In the case of the railways in future, MTRCL is requesting limited flexibility that would enable MergeCo to react to changing market conditions. Compared with the existing fare autonomy, a flexibility of 10% deviation as proposed already put considerable constraint on MergeCo's ability in this respect.

(h) Given that the FAM formula did not include any factor to reflect the profits received from property development by MergeCo, whether the Administration would consider using part of the profits from property development to set up a fare stabilization fund, or modify the FAM to take into account profits from property development so as to moderate the rate of fare increase;

The FAM is a price control regime based on a formula. Fare adjustments in future will be linked to changes to consumer price index and wage index as well as a pre-determined productivity factor. Such regime is commonly adopted elsewhere for regulation of railway fares, as illustrated by the overseas examples mentioned in our answer to question (c). One of the key characteristics of such regime is that it regulates fare changes by reference to changes to selected indices and, in some cases, a pre-determined X factor or productivity factor. Such regime does not make any reference to the profit or loss or the rate of return of the operators, otherwise this would become a rate of return regime or a profit control scheme. The common problems with the rate of return regime or profit control scheme is that it lacks incentives for the operators to improve their efficiency and control costs, and it is always difficult to determine the level of the cap on the allowable rate of return or profit level which would be accepted by all parties concerned.

The granting of property development rights to railway corporations is a

means to help bridge the funding gap for new railway projects which would otherwise be financially non-viable, such that the railway corporations can build the relevant new projects and provide railway services to the public, with fares set at a reasonable level without the need for Government subsidy. In setting the new fares, the railway corporations would take account of competition within the area and value for money, and the need to cover the operating cost in the short term and the operating cost plus depreciation in the long run. Should there be any gap between the return to be achieved and the expected return for the new railway, granting of property development would be one of the possible options to bridge the funding gap. Hence, relevant property profits have already been taken into account when the railway corporations set the initial fares of the relevant new railways.

The FAM, when compared with the existing fare autonomy, would help stabilize railway fares and moderate future fare increases. It would be based on a formulaic approach and fare adjustment rates in future would reflect the changes in consumer price index and wage index and after deducting a pre-determined productivity factor. In addition, future fare adjustments would be subject to a trigger mechanism. In any given year, there would be no fare adjustment if the overall fare adjustment rate is between 1.5% and -1.5%.

(i) In view of the uncertainty over the permitted rate of increase under the FAM, whether the Chief Executive-in-Council or Legislative Council should be given certain degree of control over future fare adjustments and whether a cap should be imposed on the rate of fare increase;

The proposed FAM is transparent and objective. Future fare adjustments are predictable by reference to changes to consumer price index and wage index which are published data. As far as MergeCo's flexibility to adjust individual fares, the FAM would reduce the operator's flexibility considerably from full discretion to only  $\pm 10$  percentage points.

Certifications from independent experts are required before MergeCo can implement fare adjustments. This is an important safeguard to ensure that fare adjustments of MergeCo are in compliance with the FAM.

MTRCL advised that in view of the drastic change from fare autonomy to price regulation by FAM, they do not agree to further limit their flexibility by

subjecting fare adjustments of MergeCo to approval by Government or LegCo.

The overall fare adjustment rate is linked to changes in consumer price index and wage index which are objective and transparent data, and which reflect the economic conditions and public affordability in Hong Kong. It is not appropriate to impose an artificial cap on the overall fare adjustment rate. It is relevant to note that in his submission, Professor Ridley of Imperial College, London stated "The formula, by allowing an automatic annual adjustment, protects the interests of the workforce of the metro by providing income that can support fair wages, protects the legitimate interests of shareholders who receive a fair return on the capital they provide, protects the interests of taxpayers by giving strong management incentives to deliver efficiency, and protects the interests of the travelling public against increases..... Therefore, in order to facilitate stable unjustified fares business decisions by the metro to deliver sustained, long-term service quality, it is essential that the agreed formula for annual adjustments in fares is adopted automatically and in full."

(j) Given that the scope for productivity gain for railway operation was limited, the inclusion of the productivity factor in the FAM might lead to a higher rate of fare increase in the end, particularly when productivity would likely reduce in future with the diminishing contribution from property development. What are the current value of the productivity factor of the railways and the projection of the values of productivity factor of MergeCo for the next ten years;

We have explained previously that there is no single authoritative methodology recognized internationally for measuring productivity of the railways. This is due to special characteristics of the railway industry which involves heavy investment and long payback period. If we were to adopt the same approach used for calculating the productivity gain of the franchised bus industry in Hong Kong to measure the productivity performance of the railway industry, it would yield a negative result of -2.6% per annum, which means that the rate of increase in revenue is slower than the rate of increase in costs for the same period for the railways. If we were to use this negative productivity value in the FAM formula, it would have the effect of amplifying future fare increases or decreasing the level of fare reduction. This would not be in the interest of the travelling public.

In the merger discussions with MTRCL, we have requested to include a positive productivity value in the FAM formula, which is to be deducted from the changes in consumer price index and wage index in calculating the overall fare adjustment so as to moderate further fare increases or increase the level of fare reduction (as the case may be) to benefit the travelling public. We eventually reached understanding with MTRCL in the merger package to set the productivity factor at a positive value of 0.1% in the FAM formula. Since MergeCo would return the benefits of the merger synergies to passengers through fare reduction immediately upon the merger before the expected synergies take full effect, under the merger package, the productivity value of 0.1% would take effect starting from the 6<sup>th</sup> year of the merger.

As explained above, the value of the productivity factor in the FAM is not directly related to any formula-calculated productivity performance of the railways in Hong Kong. Therefore, there is no question that a reduction in revenue or property profits of MergeCo in future would lead to substantial increase in MergeCo fares due to the deduction of the productivity factor in the FAM formula.

# (k) Illustration of the hypothetical changes of railway fares over the past period, say 30 years, by applying the FAM formula;

The FAM will regulate railway fares in the future after the rail merger and hence is forward-looking. It is not appropriate to artificially apply the fare adjustment formula retrospectively as if it had been agreed for application at that time, which it was not, and compare the hypothetical result with the actual fare increases in the past period.

Our position on this matter remains unchanged. Nevertheless, in view of members' request, we have done a rough analysis making hypothetical calculations for different time periods.

The FAM is to be introduced in the context of the rail merger exercise with fare reductions to re-set the fare base upon implementation of the merger. A productivity factor is included in the fare adjustment formula which would apply to MergeCo, which would be a single company operating the combined MTR and KCR networks. To mimic such situation, we have taken into

account the following in the hypothetical calculations:

- (a) productivity factor assumed to be set at zero value for the first 5 years and at 0.1% per annum thereafter;
- (b) fare reductions upon hypothetical application of the FAM are assumed; and two scenarios have been tested viz. overall fare reduction of 10% and 5 % respectively; and
- (c) actual weighted average fare increase rates of MTR and KCR are calculated by reference to the actual fare increase rates of the two corporations weighted on the basis of their fare revenues.

We have tested 4 time periods viz. 10-year, 15-year, 18-year and 22-year periods. It should be noted that when the KCR introduced electrified services in 1983, its fare structure and levels were also changed substantially. Therefore for the purpose of this exercise, it would not be appropriate to consider actual fare changes in 1983 and before, hence the longest time period for testing is 22 years.

The findings indicate that the FAM would have resulted in -

- (i) overall reduction in fares by 0.5% or  $5.7\%^2$ , as compared to actual cumulative increase of 13.8% in railway fares during the last 10 years;
- (ii) lower cumulative fare increase rate than actual during the last 15 years;
- (iii) fare increase rates comparable to the actual during the last 18 or 22 years; and
- (iv) similar results are obtained if the calculations are based on simple average rate of fare adjustments per annum over the relevant time periods.

Details are given in <u>Appendix II</u>.

## Existing concessionary and promotional programmes

(1) Whether the existing interchange concessions offered by the two railway corporations would continue after the merger. Whether the gains of the travelling public from fare reduction packages would be offset by the cancellation of interchange concessions;

<sup>&</sup>lt;sup>2</sup> Depending on the assumed rate of initial fare reduction.

No interchange concessions are currently being offered by the two railway corporations for journeys interchanging between the MTR and KCR networks. Therefore there is no question of the benefits from abolition of second boarding charge being offset by cancellation of interchange concessions. The following examples will help explain the matter:

|         |          |         |           |          |          | Extro            |             |
|---------|----------|---------|-----------|----------|----------|------------------|-------------|
|         |          |         |           |          |          | Exua             |             |
|         |          |         |           | Second   |          | Reduction        |             |
|         | Existing | New     | Global    | Boarding | Long     | to achieve       | Total       |
|         | Fare     | Fare    | Reduction | Charge   | distance | minimum of       | Reduction   |
|         | (a)      | (b)     | (c)       | (d)      | (e)      | 10% reduction    | (g)         |
|         |          | = (a) – |           |          |          | for journeys     | = (c) + (d) |
|         |          | (g)     |           |          |          | charging \$12 or | +(e) + (f)  |
|         |          |         |           |          |          | more             |             |
|         |          |         |           |          |          | (f)              |             |
| Tuen    | \$24.4   | \$21.9  | \$0.2     | \$1      | \$1      | \$0.3            | \$2.5       |
| Mun –   |          |         |           |          |          |                  | (10.2%)     |
| Central |          |         |           |          |          |                  |             |
| Tung    | \$20.2   | \$18    | \$0.2     | \$1      | \$1      | -                | \$2.2       |
| Chung – |          |         |           |          |          |                  | (10.9%)     |
| Shatin  |          |         |           |          |          |                  |             |

Note: Free Light Rail connection to or from West Rail will continue to be provided upon the merger.

#### **Concessionary fares for persons with disabilities**

- (m) Whether an undertaking could be given by the Administration to grant concessionary fares to persons with disabilities (PwDs) if a clear definition of PwDs was available to determine the number of eligible passengers; and
- (n) The railway corporations' projection on the number of PwDs that would be eligible for concessionary fares, the financial implication for providing such concession and the basis of their calculation.

Public transport services in Hong Kong are provided by the private sector under prudent commercial principles without Government subsidy. Should the Government make it mandatory for the operators to offer any particular fare concession, the income of the operators may drop which would pose pressure for fare increase. This would not be in the interest of the public. The Government has to balance the operating environment of the operators to ensure the provision of reliable and quality services. The application of prudent commercial principles to public transport operation can ensure service provision without Government subsidy. The Government will continue to follow this principle which is in the public interest. Whether or not fare concessions would be provided would continue to be decided by the public transport operators.

Pursuant to the "Special Topics Report No. 28 – Persons with disabilities and chronic diseases" published by the Census and Statistics Department in August 2001, the estimated number of people with disabilities is around 270,000. In view of the large number of PwDs, the LegCo Sub-Committee to Study the Transport Needs and Provision of Concessionary Public Transport Fares for Persons with Disabilities has proposed that concessionary fares should be offered to recipients of Disability Allowance (DA) and Comprehensive Social Security Assistance (CSSA) with 100% loss of earning capacity as the first step. As there are concerns that provision of concessionary fares to PwDs on a selective basis may constitute a contravention of the Disability Discrimination Ordinance (DDO), the Health, Welfare and Food Bureau (HWFB) is planning to introduce legislative amendments to the DDO.

The major public transport operators (including the railway corporations) indicated that they do not have sufficient information to make an assessment on the loss of fare revenue arising from provision of fare concessions to recipients of DA and CSSA with 100% loss of earning capacity. In this connection, HWFB commissioned the University of Hong Kong in July this year to conduct a survey on recipients of DA and CSSA with 100% loss of earning capacity to understand their pattern of travel on public transport. The aim of the survey is to provide public transport operators with more reliable information to facilitate their assessment of the financial impact of the proposed fare concessions.

#### Appendix I

#### Fare adjustments within +/-10% points from the overall fare adjustment rate

Example: Despite overall fare increase under FAM, MergeCo would reduce the fares for selected journeys in face of drop in railway market share or patronage following the introduction of new competing services and/or price cut by its competitors.

#### Assumed overall increase rate from FAM = 2.0%

In this example, MergeCo would reduce the fares for journeys X - C and X - D by 8% due to competition factor, and slightly adjust upward the rate of fare increase for the other journeys in such a way that would result in compliance with the overall FAM adjusted rate of 2%.

|     |                              | Station  |       |        |        |        |        |        |        |        |        |           |
|-----|------------------------------|----------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|
| Fro | om Station X to              | <u>A</u> | В     | С      | D      | E      | F      | G      | H      | Ι      | J      | ALL       |
| (a) | No. of Passengers            | 2400     | 2400  | 300    | 400    | 1800   | 2000   | 3000   | 1800   | 2000   | 3000   | 19100     |
| (b) | Existing Fare                | \$7.9    | \$7.9 | \$10.0 | \$10.0 | \$10.0 | \$10.0 | \$10.0 | \$11.0 | \$11.8 | \$11.8 | \$10.11 * |
| (c) | New Fare                     | \$8.1    | \$8.1 | \$9.2  | \$9.2  | \$10.2 | \$10.2 | \$10.2 | \$12.1 | \$12.1 | \$12.1 | \$10.31 * |
|     | Change in Fare = $(c)/(b)-1$ | 2.5%     | 2.5%  | -8.0%  | -8.0%  | 2.0%   | 2.0%   | 2.0%   | 2.5%   | 2.5%   | 2.5%   | 2.0%      |

\* Overall average fare weighted by the number of passengers for different fares involved.

| Time period   | Assumed       | % increas    | se in fares             | Average fare adjustment rate       |                         |  |
|---------------|---------------|--------------|-------------------------|------------------------------------|-------------------------|--|
|               | initial fare  | since ba     | ase year                | per annum during the               |                         |  |
|               | hypothetical  |              |                         | relevant time periods <sup>#</sup> |                         |  |
|               | retrospective | Hypothetical | Actual                  | Hypothetical                       | Actual                  |  |
|               | application   | fare         | weighted                | fare                               | weighted                |  |
|               | of FAM        | adjustment   | average fare            | adjustment                         | average fare            |  |
|               |               | under FAM    | adjustment              | under FAM                          | adjustment              |  |
|               |               |              | of MTR <sup>1</sup> and |                                    | of MTR <sup>1</sup> and |  |
|               |               |              | KCR <sup>2</sup>        |                                    | KCR <sup>2</sup>        |  |
| Last 10 years | -10%          | -5.7%*       | 12 80/                  | -0.5%*                             | 1 20/                   |  |
| (1996 – 2005) | -5%           | -0.5%*       | +13.8%                  | -0.0%*                             | +1.3%                   |  |
| Last 15 years | -10%          | +52.2%*      | 67 20/                  | +3.0%*                             | 12.60/                  |  |
| (1991 – 2005) | -5%           | +60.7%*      | +07.2%                  | +3.4%*                             | +3.0%                   |  |
| Last 18 years | -10%          | +112.1%*     | 116 /0/                 | +4.5%*                             | 4 50/                   |  |
| (1988 – 2005) | -5%           | +123.8%      | +110.4%                 | +4.8%                              | +4.3%                   |  |
| Last 22 years | -10%          | +181.3%*     | +10/ 20/                | +5.0%*                             | +5 10/                  |  |
| (1984 – 2005) | -5%           | +196.9%      | +194.3%                 | +5.2%                              | +3.1%                   |  |

## Change in fares since base year for different time periods: Hypothetical vs actual fare adjustment rates

\* Hypothetical fare adjustment rates are the same as or lower than the actual.

<sup>#</sup> Supporting data are given in Floats 1 - 4 to this Appendix.

 <sup>&</sup>lt;sup>1</sup> Excluding Airport Express Line
 <sup>2</sup> East Rail (excluding through train service)

## <u>Comparison of Hypothetical and Actual Fare Adjustment Rates</u>\* (Last 10 years)

|                   |                               | Vear-on-vear %          | Hypothetical rature        | Actual weighted           |                           |
|-------------------|-------------------------------|-------------------------|----------------------------|---------------------------|---------------------------|
| Year              | Year-on-year % change in CCPI | change in wage<br>index | Initial 10% fare reduction | Initial 5% fare reduction | average of MTR<br>and KCR |
| 1995              | 9.1%                          | 6.7%                    | N.A.                       | N.A.                      | N.A.                      |
| 1996              | 6.3%                          | 7.0%                    | -10.0%                     | -5.0%                     | 6.9%                      |
| 1997              | 5.8%                          | 7.0%                    | 6.7%                       | 6.7%                      | 5.7%                      |
| 1998              | 2.8%                          | 4.3%                    | 6.4%                       | 6.4%                      | 0.0%                      |
| 1999              | -4.0%                         | -1.6%                   | 3.6%                       | 3.6%                      | 0.0%                      |
| 2000              | -3.8%                         | -3.1%                   | -2.8%                      | -2.8%                     | $0.7\%$ $^2$              |
| 2001              | -1.6%                         | 0.3%                    | -3.5%                      | -3.5%                     | 0.0%                      |
| 2002              | -3.0%                         | 0.0%                    | -0.8%                      | -0.8%                     | 0.0%                      |
| 2003              | -2.6%                         | -1.6%                   | -1.6%                      | -1.6%                     | 0.0%                      |
| 2004              | -0.4%                         | -0.3%                   | -2.2%                      | -2.2%                     | 0.0%                      |
| 2005              | 1.0%                          | 0.5%                    | -0.5%                      | -0.5%                     | 0.0%                      |
| Average 1996-2005 |                               |                         | -0.5%                      | 0.0%                      | 1.3%                      |

\* All figures are rounded to one decimal place.

Notes

1. The rate of adjustment is calculated using the data on the % change in CCPI and wage index of preceding year.

2. This is due to the imposition of a surcharge of \$0.1 per trip for installation of platform screen doors at selected MTR stations.

## <u>Comparison of Hypothetical and Actual Fare Adjustment Rates</u>\* (Last 15 years)

|           |                |                |                  | Hypothetical rate of adjustment |                   |  |
|-----------|----------------|----------------|------------------|---------------------------------|-------------------|--|
|           |                | Year-on-year % | under            | FAM <sup>1</sup>                | Actual weighted   |  |
|           | Year-on-year % | change in wage | Initial 10% fare | Initial 5% fare                 | average of MTR    |  |
| Year      | change in CCPI | index          | reduction        | reduction                       | and KCR           |  |
| 1990      | 10.2%          | 14.0%          | N.A.             | N.A.                            | N.A.              |  |
| 1991      | 11.6%          | 13.7%          | -10.0%           | -5.0%                           | 9.9%              |  |
| 1992      | 9.6%           | 12.1%          | 12.7%            | 12.7%                           | 9.1%              |  |
| 1993      | 8.8%           | 10.8%          | 10.9%            | 10.9%                           | 8.5%              |  |
| 1994      | 8.8%           | 10.6%          | 9.8%             | 9.8%                            | 5.0%              |  |
| 1995      | 9.1%           | 6.7%           | 9.7%             | 9.7%                            | 7.5%              |  |
| 1996      | 6.3%           | 7.0%           | 7.9%             | 7.9%                            | 6.9%              |  |
| 1997      | 5.8%           | 7.0%           | 6.6%             | 6.6%                            | 5.7%              |  |
| 1998      | 2.8%           | 4.3%           | 6.3%             | 6.3%                            | 0.0%              |  |
| 1999      | -4.0%          | -1.6%          | 3.5%             | 3.5%                            | 0.0%              |  |
| 2000      | -3.8%          | -3.1%          | -2.9%            | -2.9%                           | 0.7% <sup>2</sup> |  |
| 2001      | -1.6%          | 0.3%           | -3.6%            | -3.6%                           | 0.0%              |  |
| 2002      | -3.0%          | 0.0%           | -0.8%            | -0.8%                           | 0.0%              |  |
| 2003      | -2.6%          | -1.6%          | -1.6%            | -1.6%                           | 0.0%              |  |
| 2004      | -0.4%          | -0.3%          | -2.2%            | -2.2%                           | 0.0%              |  |
| 2005      | 1.0%           | 0.5%           | -0.5%            | -0.5%                           | 0.0%              |  |
| Average   |                |                |                  |                                 |                   |  |
| 1991-2005 |                |                | 3.0%             | 3.4%                            | 3.6%              |  |

\* All figures are rounded to one decimal place.

Notes

- 1. The rate of adjustment is calculated using the data on the % change in CCPI and wage index of preceding year.
- 2. This is due to the imposition of a surcharge of \$0.1 per trip for installation of platform screen doors at selected MTR stations.

## <u>Comparison of Hypothetical and Actual Fare Adjustment Rates</u>\* (Last 18 years)

|           |                |                | Hypothetical rat |                  |                 |
|-----------|----------------|----------------|------------------|------------------|-----------------|
|           |                | Year-on-year % | under            | FAM <sup>1</sup> | Actual weighted |
|           | Year-on-year % | change in wage | Initial 10% fare | Initial 5% fare  | average of MTR  |
| Year      | change in CCPI | index          | reduction        | reduction        | and KCR         |
| 1987      | 5.7%           | 9.0%           | N.A.             | N.A.             | N.A.            |
| 1988      | 7.8%           | 10.4%          | -10.0%           | -5.0%            | 8.6%            |
| 1989      | 10.3%          | 18.1%          | 9.1%             | 9.1%             | 8.4%            |
| 1990      | 10.2%          | 14.0%          | 14.2%            | 14.2%            | 9.9%            |
| 1991      | 11.6%          | 13.7%          | 12.1%            | 12.1%            | 9.9%            |
| 1992      | 9.6%           | 12.1%          | 12.7%            | 12.7%            | 9.1%            |
| 1993      | 8.8%           | 10.8%          | 10.9%            | 10.9%            | 8.5%            |
| 1994      | 8.8%           | 10.6%          | 9.7%             | 9.7%             | 5.0%            |
| 1995      | 9.1%           | 6.7%           | 9.6%             | 9.6%             | 7.5%            |
| 1996      | 6.3%           | 7.0%           | 7.8%             | 7.8%             | 6.9%            |
| 1997      | 5.8%           | 7.0%           | 6.6%             | 6.6%             | 5.7%            |
| 1998      | 2.8%           | 4.3%           | 6.3%             | 6.3%             | 0.0%            |
| 1999      | -4.0%          | -1.6%          | 3.5%             | 3.5%             | 0.0%            |
| 2000      | -3.8%          | -3.1%          | -2.9%            | -2.9%            | $0.7\%$ $^2$    |
| 2001      | -1.6%          | 0.3%           | -3.6%            | -3.6%            | 0.0%            |
| 2002      | -3.0%          | 0.0%           | -0.8%            | -0.8%            | 0.0%            |
| 2003      | -2.6%          | -1.6%          | -1.6%            | -1.6%            | 0.0%            |
| 2004      | -0.4%          | -0.3%          | -2.2%            | -2.2%            | 0.0%            |
| 2005      | 1.0%           | 0.5%           | -0.5%            | -0.5%            | 0.0%            |
| Average   |                |                |                  |                  |                 |
| 1988-2005 |                |                | 4.5%             | 4.8%             | 4.5%            |

\* All figures are rounded to one decimal place.

<u>Notes</u>

1. The rate of adjustment is calculated using the data on the % change in CCPI and wage index of preceding year.

2. This is due to the imposition of a surcharge of \$0.1 per trip for installation of platform screen doors at selected MTR stations.

## <u>Comparison of Hypothetical and Actual Fare Adjustment Rates</u>\* (Last 22 years)

|                   |                |                      | Hypothetical ra<br>under | te of adjustment<br>FAM <sup>1</sup> | A stual weighted |  |
|-------------------|----------------|----------------------|--------------------------|--------------------------------------|------------------|--|
|                   | Year-on-year % | Year-on-year %       | Initial 10% fare         | Initial 5% fare                      | average of MTR   |  |
| Year              | change in CCPI | change in wage index | reduction                | reduction                            | and KCR          |  |
| 1983              | 10.0%          | 8.6%                 | N.A.                     | N.A.                                 | N.A.             |  |
| 1984              | 8.6%           | 11.5%                | -10.0%                   | -5.0%                                | 15.8%            |  |
| 1985              | 3.5%           | 9.7%                 | 10.1%                    | 10.1%                                | 5.1%             |  |
| 1986              | 3.8%           | 7.6%                 | 6.6%                     | 6.6%                                 | 5.1%             |  |
| 1987              | 5.7%           | 9.0%                 | 5.7%                     | 5.7%                                 | 6.3%             |  |
| 1988              | 7.8%           | 10.4%                | 7.4%                     | 7.4%                                 | 8.6%             |  |
| 1989              | 10.3%          | 18.1%                | 9.1%                     | 9.1%                                 | 8.4%             |  |
| 1990              | 10.2%          | 14.0%                | 14.1%                    | 14.1%                                | 9.9%             |  |
| 1991              | 11.6%          | 13.7%                | 12.0%                    | 12.0%                                | 9.9%             |  |
| 1992              | 9.6%           | 12.1%                | 12.6%                    | 12.6%                                | 9.1%             |  |
| 1993              | 8.8%           | 10.8%                | 10.8%                    | 10.8%                                | 8.5%             |  |
| 1994              | 8.8%           | 10.6%                | 9.7%                     | 9.7%                                 | 5.0%             |  |
| 1995              | 9.1%           | 6.7%                 | 9.6%                     | 9.6%                                 | 7.5%             |  |
| 1996              | 6.3%           | 7.0%                 | 7.8%                     | 7.8%                                 | 6.9%             |  |
| 1997              | 5.8%           | 7.0%                 | 6.6%                     | 6.6%                                 | 5.7%             |  |
| 1998              | 2.8%           | 4.3%                 | 6.3%                     | 6.3%                                 | 0.0%             |  |
| 1999              | -4.0%          | -1.6%                | 3.5%                     | 3.5%                                 | 0.0%             |  |
| 2000              | -3.8%          | -3.1%                | -2.9%                    | -2.9%                                | $0.7\%$ $^2$     |  |
| 2001              | -1.6%          | 0.3%                 | -3.6%                    | -3.6%                                | 0.0%             |  |
| 2002              | -3.0%          | 0.0%                 | -0.8%                    | -0.8%                                | 0.0%             |  |
| 2003              | -2.6%          | -1.6%                | -1.6%                    | -1.6%                                | 0.0%             |  |
| 2004              | -0.4%          | -0.3%                | -2.2%                    | -2.2%                                | 0.0%             |  |
| 2005              | 1.0%           | 0.5%                 | -0.5%                    | -0.5%                                | 0.0%             |  |
| Average 1984-2005 |                |                      | 5.0%                     | 5.2%                                 | 5.1%             |  |

\* All figures are rounded to one decimal place.

Notes

- 1. The rate of adjustment is calculated using the data on the % change in CCPI and wage index f preceding year.
- 2. This is due to the imposition of a surcharge of \$0.1 per trip for installation of platform screendoors at selected MTR stations.