

# CHANGES TO THE SYLLABUS AND CORE READING FOR SUBJECT CT4 FOR THE 2009 EXAMINATIONS

## Changes to the Syllabus and their impact on Core Reading

*Syllabus objective (iii) 2 has been changed from:*

2. State the recurrence relations that represent a Markov chain.

*to:*

2. State the Chapman-Kolmogorov equations that represent a Markov chain.

*This syllabus change is to improve clarity and has not resulted in any changes to the Core Reading.*

## Changes to Core Reading

### UNIT 4

#### Section 3.2

*The two main formulae have been changed to:*

For instance, when  $0 < t_1 < t_2 < \dots < t_n$

$$\Pr[X_0 = i, X_{t_1} = j_1, X_{t_2} = j_2, \dots, X_{t_n} = j_n] = q_i p_{ij_1}(t_1) p_{j_1 j_2}(t_2 - t_1) \dots p_{j_{n-1} j_n}(t_n - t_{n-1})$$

and

$$\Pr[X_{t_1} = j_1, X_{t_2} = j_2, \dots, X_{t_n} = j_n] = \sum_{i \in S} q_i p_{ij_1}(t_1) p_{j_1 j_2}(t_2 - t_1) \dots p_{j_{n-1} j_n}(t_n - t_{n-1})$$

### UNIT 12

#### Section 6.2

*References to the CMIB have been changed to the CMI.*

*The only other changes that have been made to the Core Reading are to correct typographical errors and improve the style.*

**END**