**Appendices**Supplementary table 1: Definitions of decision-making systems. (Leong et al., 2013)

| System       | <b>Definition (companies)</b>           | <b>Definition (agencies)</b>          |
|--------------|---|---------------------------------------|
|              | Our internal system regarding the       | Our internal system for the final     |
|              | decision-making process to support the  | decision-making process to            |
|              | reimbursement of new medicines via      | recommend/restrict or not to          |
|              | the relevant HTA agencies is a purely   | recommend a new medicine for          |
| Qualitative  | qualitative based on experts or         | reimbursement is a purely qualitative |
|              | management making a subjective          | based on experts making a subjective  |
|              | decision. The final decision will be    | decision. The final recommendation    |
|              | exercised based on Expert Judgment      | decision will be exercised based on   |
|              | and experience.                         | Expert Judgment and experience.       |
| Quantitative | Our internal system regarding the       | Our internal system for the final     |
|              | decision-making process to support the  | decision-making process to            |
|              | reimbursement of new medicines via      | recommend/ restrict or not to         |
|              | the relevant HTA agencies is            | recommend a new medicine for          |
|              | quantitative which brings together the  | reimbursement is fully quantitative   |
|              | various key data for the decision (such | which brings together the various key |
|              | as comparative effectiveness data) and  | data for the recommendation decision  |
|              | contributing opinions. The conclusion   | (such as comparative effectiveness    |
|              | is based on the cumulative outcome      | data) and contributing opinions. The  |
|              | from this system.                       | conclusion is based on the cumulative |
|              |   |                                       |

|       |   | outcome from this system.  |
|-------|---|--|
| Mixed | Our internal system regarding the decision-making process to support the reimbursement of new medicines via the relevant HTA agencies is mixed, which takes into account various quantitative and qualitative elements. | Our internal system for the final decision-making process to recommend/restrict or not to recommend a new medicine for reimbursement is mixed, which takes into account various quantitative and qualitative elements. |

## Supplementary table 2: Characteristics and definitions of biases. (Lovallo & Sibony, 2010)

| Bias type           | Definition   | Characteristics   |
|---------------------|--|---|
| Action-<br>oriented | A bias that drives us to take action less thoughtfully than we should                  | <ul><li>Excessive optimism</li><li>Overconfidence</li><li>Intuition/gut-feeling</li></ul>   |
| Interest            | A bias that arises in the presence of conflicting incentives, including emotional ones | <ul> <li>Misaligned individual incentives</li> <li>Inappropriate attachments</li> <li>Misaligned perception of corporate goals/hierarchy</li> </ul> |

|                     |  | Confirmation bias to seek out             |
|---------------------|--|---|
| Pattern-recognition | A bias that leads us to recognise patterns even where there are none         | information that supports a favoured      |
|                     |  | decision                                  |
|                     |  | Generalising based on examples that are   |
|                     |  | recent or memorable                       |
|                     |  | Evaluating a plan or proposal based on    |
|                     |  | the track record of the person presenting |
|                     |  | it, more than on the facts supporting it  |
|                     |  | Preference for the status quo in the      |
| Stability           | A bias that creates a tendency toward inertia in the presence of uncertainty | absence of pressure to change it          |
|                     |  | The tendency to feel losses more          |
|                     |  | acutely than gains of the same amount     |
|                     |  | Rooting oneself to an initial value,      |
|                     |  | leading to insufficient adjustments of    |
|                     |  | subsequent estimates.                     |