Living Until 120:
The Implications for Absolutely Everything

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Joint IACA, IAAHS and PBSS Colloquium in Hong Kong
www.actuaries.org/HongKong2012/
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Longevity: good and bad
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Expected length of life at birth, by sex, Australia, 1901-10 to 2004-06

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Source: Transitions in Mortality from Cardiovascular Disease in Hong Kong, Shanghai and Taipei City: Trends, Patterns, and Contribution to Improvement of Life Expectancy by Jiaying Zhao, Zhongwei Zhao, Jow Ching Tu and Guixiang Song.
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**Table 1: Life Expectancy of Singapore's Resident Population**

<table>
<thead>
<tr>
<th>Years</th>
<th>At Birth</th>
<th></th>
<th></th>
<th>At Age 65 Years</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Males</td>
<td>Females</td>
<td>Total</td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>2003</td>
<td>79.1</td>
<td>76.6</td>
<td>81.6</td>
<td>18.0</td>
<td>16.2</td>
<td>19.6</td>
</tr>
<tr>
<td>2004</td>
<td>79.6</td>
<td>77.1</td>
<td>82.0</td>
<td>18.4</td>
<td>16.5</td>
<td>20.0</td>
</tr>
<tr>
<td>2005</td>
<td>80.1</td>
<td>77.6</td>
<td>82.5</td>
<td>18.7</td>
<td>16.9</td>
<td>20.4</td>
</tr>
<tr>
<td>2006</td>
<td>80.3</td>
<td>77.8</td>
<td>82.6</td>
<td>18.9</td>
<td>17.1</td>
<td>20.4</td>
</tr>
<tr>
<td>2007</td>
<td>80.6</td>
<td>78.1</td>
<td>82.9</td>
<td>19.0</td>
<td>17.2</td>
<td>20.6</td>
</tr>
<tr>
<td>2008</td>
<td>80.9</td>
<td>78.4</td>
<td>83.3</td>
<td>19.3</td>
<td>17.5</td>
<td>20.8</td>
</tr>
<tr>
<td>2009</td>
<td>81.4</td>
<td>78.9</td>
<td>83.7</td>
<td>19.6</td>
<td>17.8</td>
<td>21.2</td>
</tr>
<tr>
<td>2010&lt;sup&gt;P&lt;/sup&gt;</td>
<td>81.8</td>
<td>79.3</td>
<td>84.1</td>
<td>19.9</td>
<td>18.1</td>
<td>21.5</td>
</tr>
</tbody>
</table>

P = preliminary. Source: Singapore Department of Statistics 2 May 2011
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Figure 5: Actual and projected life expectancy at birth, UK males.

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Figure 3: ABC News and Med Page Today’s top-ten US medical advances of 2000 – 2010

1. Human genome discoveries reach the bedside
2. Doctors and patients harness information technology
3. Anti-smoking laws and campaigns reduce public smoking
4. Heart disease drops by 40%
5. Stem-cell research: laboratory breakthroughs and some clinical advances
6. Targeted therapies for cancer expand with new drugs
7. Combination drug therapy extends HIV survival
8. Minimally invasive and robotic techniques revolutionise surgery
9. Study finds heart and cancer risk with hormone replacement therapy
10. Scientists peer into the mind with functional MRI

From: “A window into the future: Understanding and predicting longevity,” SwissRe, 2011
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Figure 6: Mortality by cause, England and Wales

Source: British Actuarial Journal 12, Richards, Kirkby & Curry, 2005. Reproduced with kind permission of Stephen Richards
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Longevity: implications for FS

...ageing societies, changing needs
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Potential product issues
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The FS business of the future
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Questions & discussion