



Gen Re Dread Disease Survey 2004-2008 – Initial Results

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Meeting the Challenges of Change

14th Global Conference of Actuaries

19th – 21st Feb, 2012 | Mumbai, India

Agenda

- Background of Gen Re's Dread Disease Survey
 - The 2004-2008 Survey results
 - Market Survey and Product Features
 - Claims Analysis
 - Incidence Rates Analysis
 - Summary
- 

Number of participating companies

Hong Kong
17 (16)

Malaysia
11 (7)

Singapore
7 (6)

Thailand
5
(new)

South Africa
0 (3)

**95 companies in the Gen
Re Dread Disease
Survey 2004-2008**

Indonesia
4 *(new)*

New Zealand
11 *(new)*

Korea
3 *(new)*

Australia
10 *(new)*

UK
4 (4)

China
25 (12)

Expanding Scope of the Survey

| | Survey | Countries | Companies | Claims | Lives In-force |
|---|-------------|-----------|-----------|---------|----------------|
| 1 | 1990–1994 | 3 | | 4,600 | |
| 2 | 1993–1997 | 3 | | 7,000 | 3 million |
| 3 | 1996–2000 | 3 | 31 | 16,000 | 4 million |
| 4 | 2000–2004 | 6 | 48 | 263,000 | 41 million |
| 5 | 2004–2008 * | 10 | 95 | 750,000 | > 70 million |

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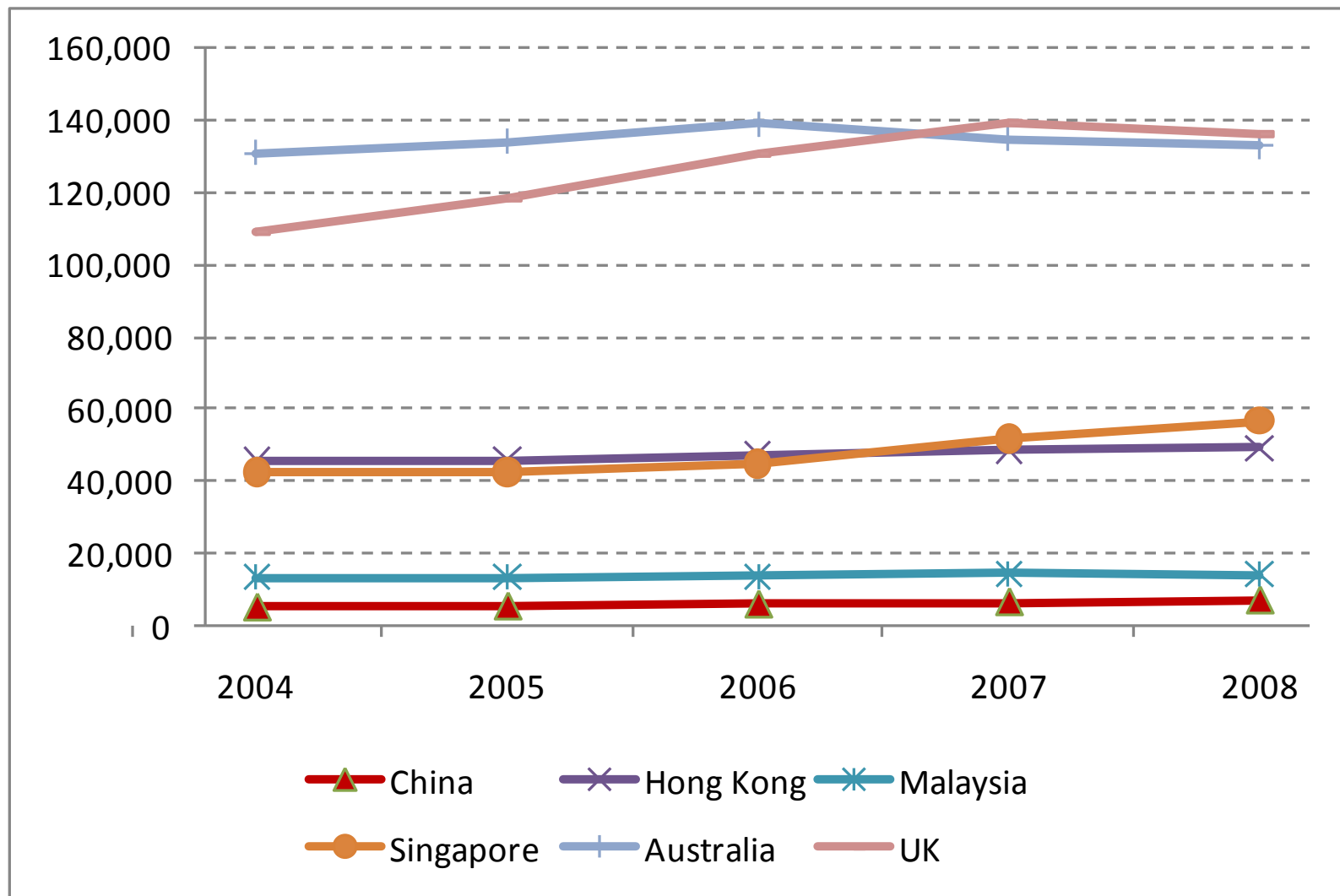
Distribution of In-Force Policies by Product Type

| | Total | China | Hong Kong | Malaysia | Singapore | Korea | Australia | UK |
|--------------|-------------------|-------------------|------------------|------------------|------------------|------------------|----------------|------------------|
| Traditional | 65,881,831 | 56,518,249 | 1,301,874 | 3,240,367 | 1,159,556 | 1,094,701 | 573,521 | 1,993,563 |
| Juvenile | 1,917,749 | 1,788,851 | 76,908 | 8,713 | 42,785 | 0 | 492 | 0 |
| Cancer | 650,960 | 625,527 | 1,987 | 23,384 | 62 | 0 | 0 | 0 |
| Female | 545,635 | 206,543 | 144,768 | 162,351 | 31,973 | 0 | 0 | 0 |
| Male | 3,661 | 0 | 3,362 | 0 | 299 | 0 | 0 | 0 |
| Total | 68,999,836 | 59,139,170 | 1,528,899 | 3,434,815 | 1,234,675 | 1,094,701 | 574,013 | 1,993,563 |

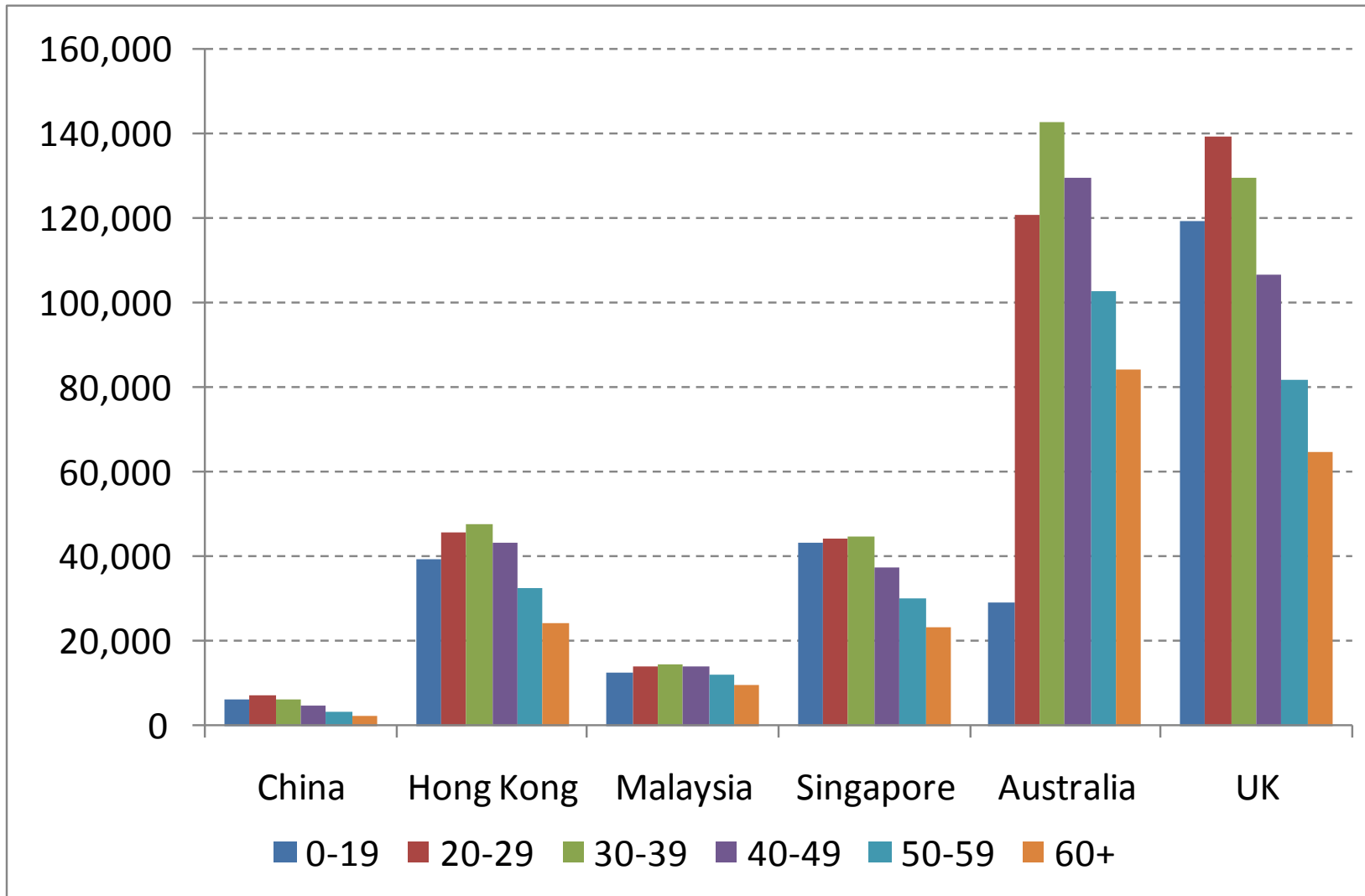
In-Force Policies by Age Band

| Age Group | China | Hong Kong | Malaysia | Singapore | Korea | Australia | UK |
|------------------|-------|-----------|----------|-----------|-------|-----------|------|
| 0-19 | 15% | 5% | 19% | 16% | 9% | 2% | 0% |
| 20-29 | 12% | 17% | 21% | 16% | 29% | 7% | 15% |
| 30-39 | 28% | 34% | 30% | 28% | 30% | 30% | 43% |
| 40-49 | 29% | 30% | 20% | 25% | 23% | 40% | 33% |
| 50-59 | 15% | 12% | 9% | 13% | 7% | 19% | 9% |
| 60+ | 2% | 2% | 1% | 2% | 0% | 2% | 1% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Average Age | 35.8 | 37.3 | 31.7 | 34.5 | 33.8 | 41.6 | 38.3 |
| Average duration | 3.7 | 5.6 | 6.0 | 8.1 | 2.0 | 5.1 | 4.1 |

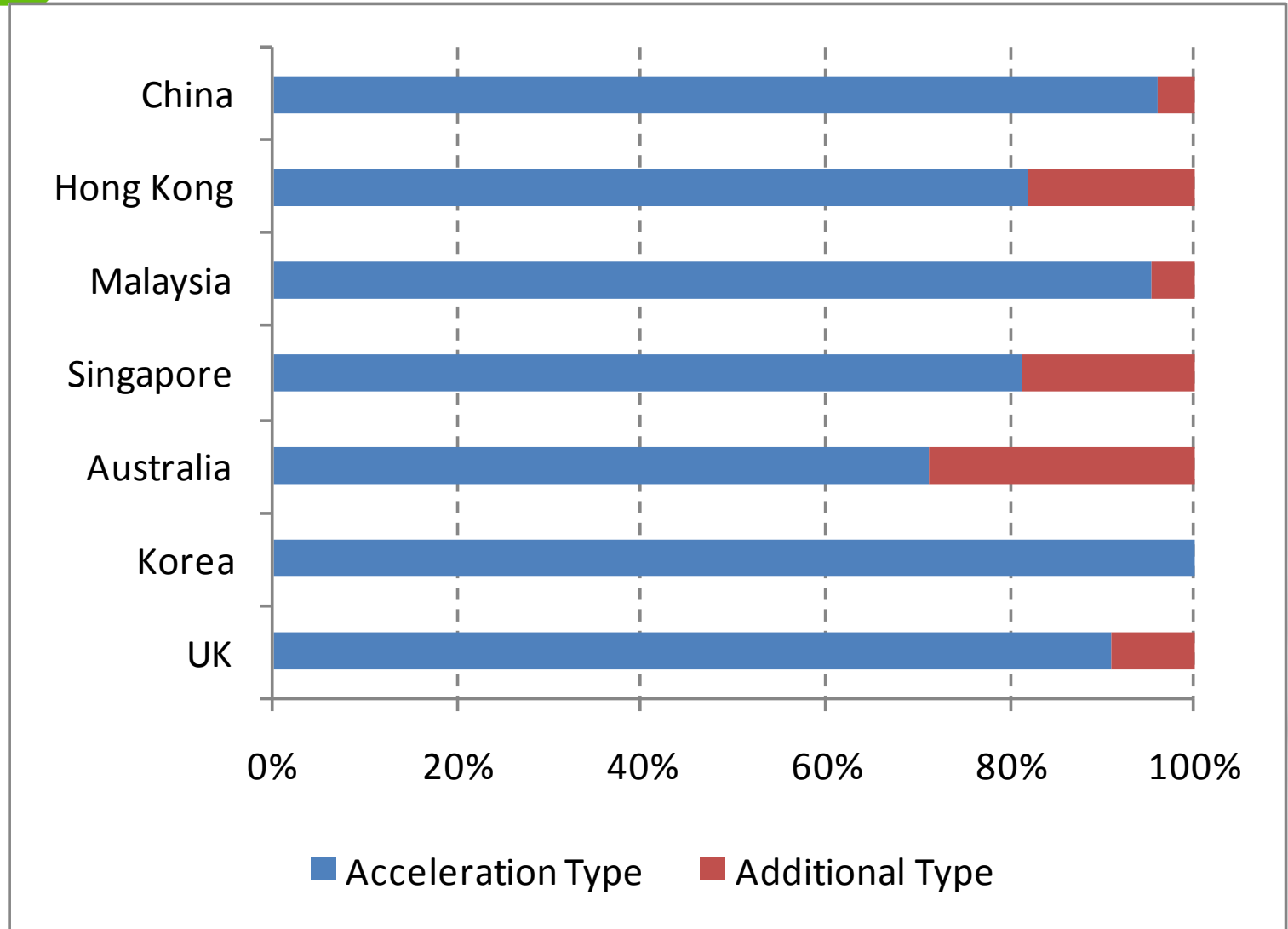
Average Sum Insured (US\$) for New Business



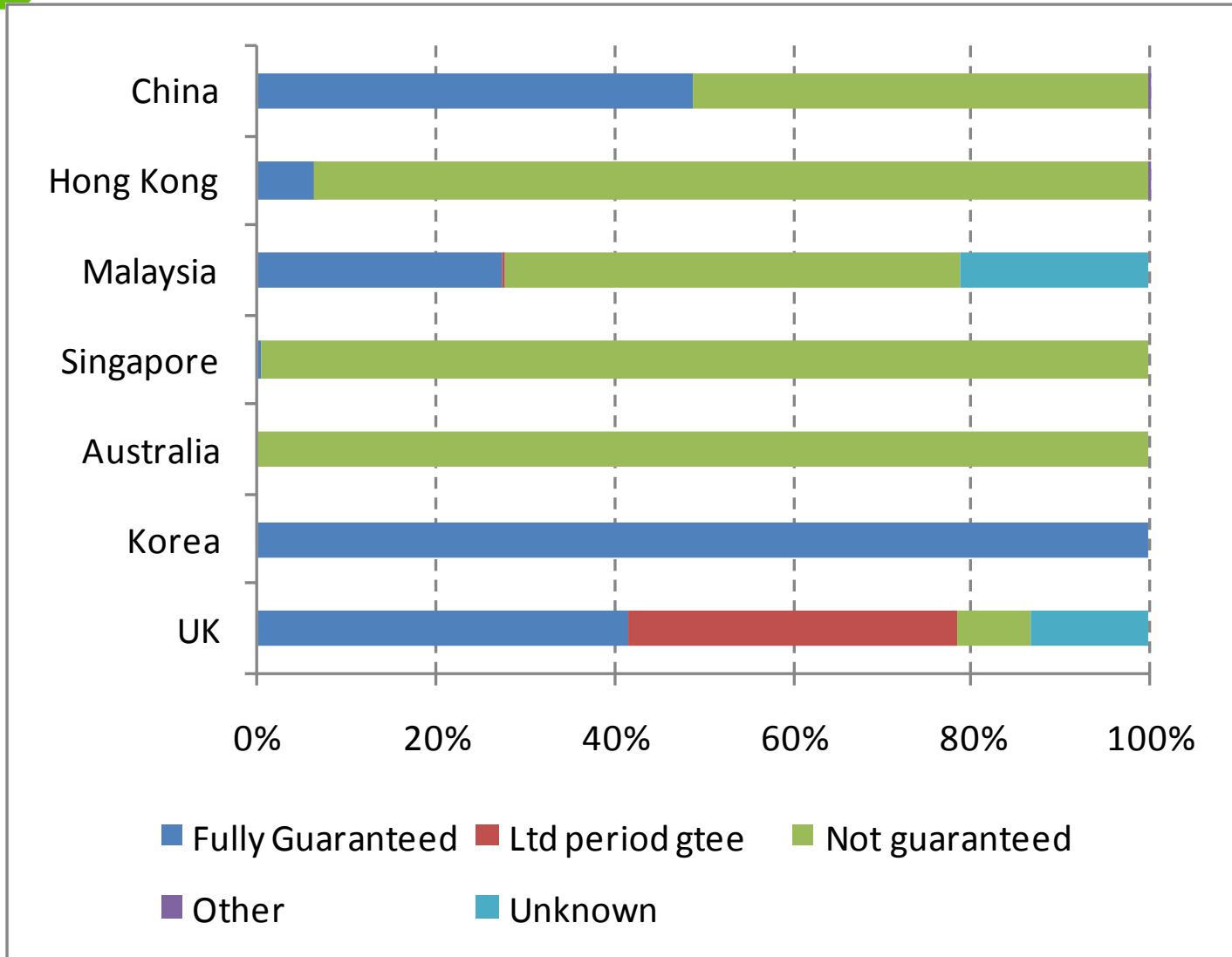
Average Sum Insured (US\$) of In-Force Policies by Age Band



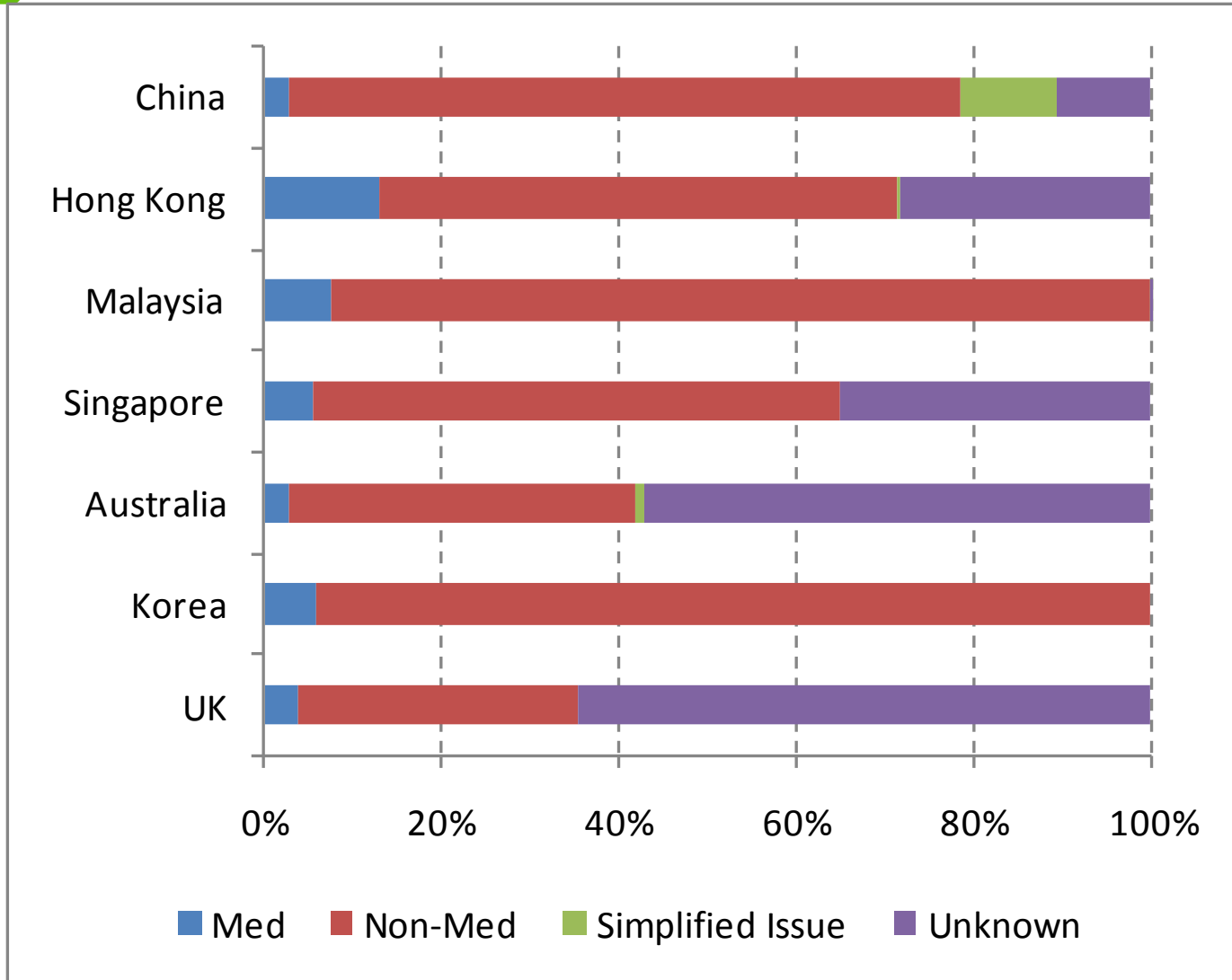
Benefit Type



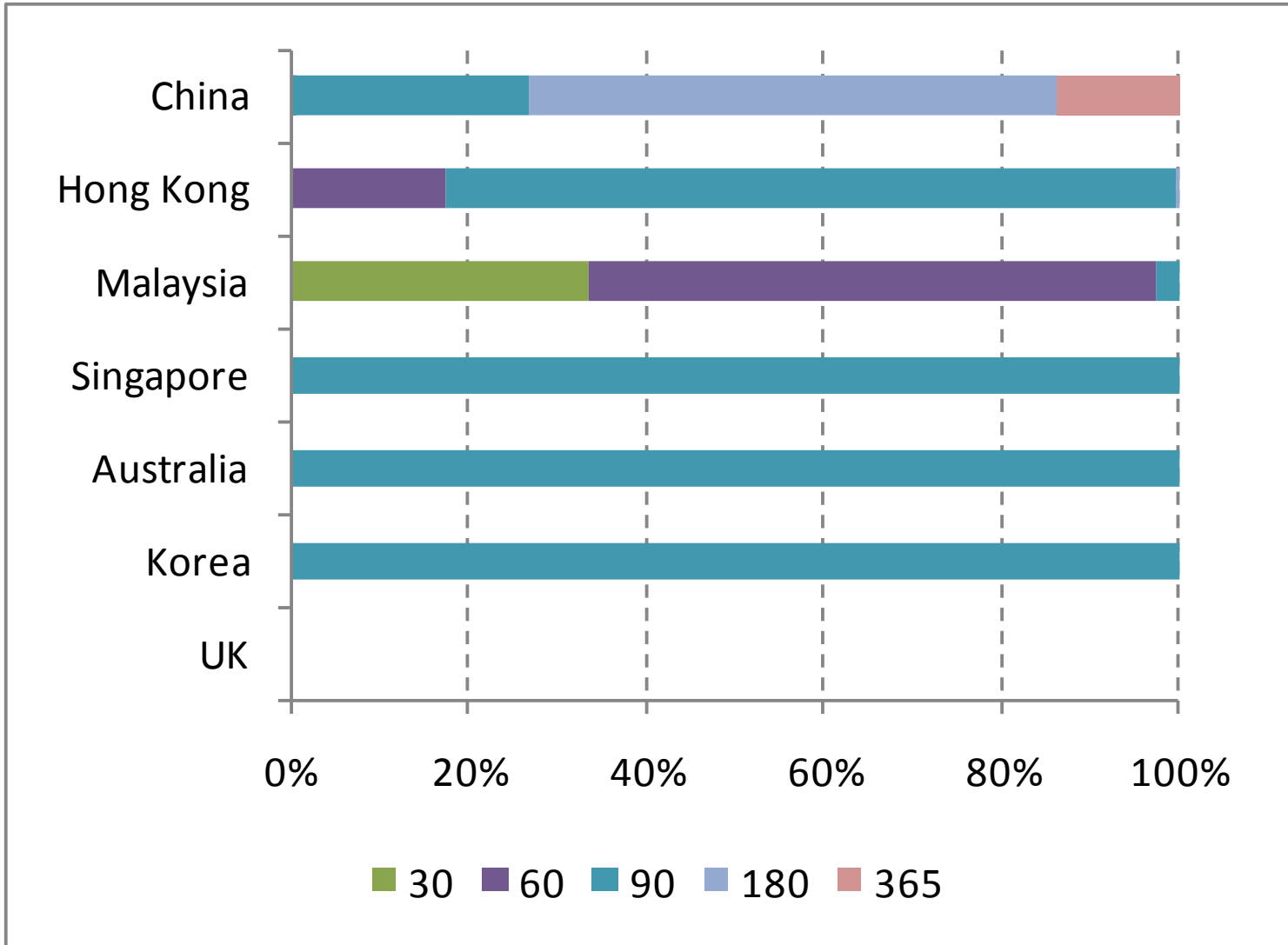
Premium Reviewability – In-Force Policies



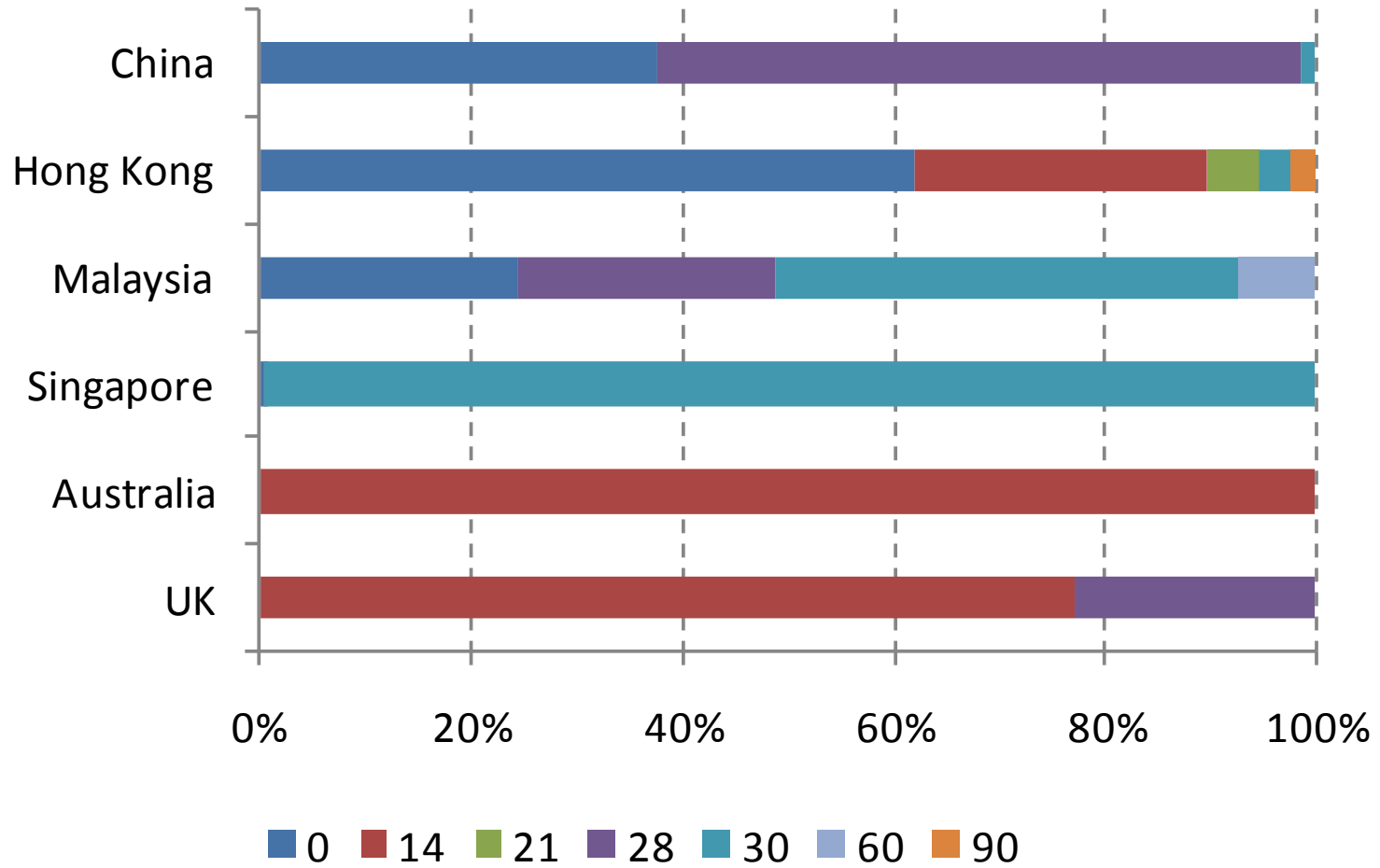
Med Distribution of In-Force Business



Waiting Period



Survival Period for Additional DD Products



Agenda

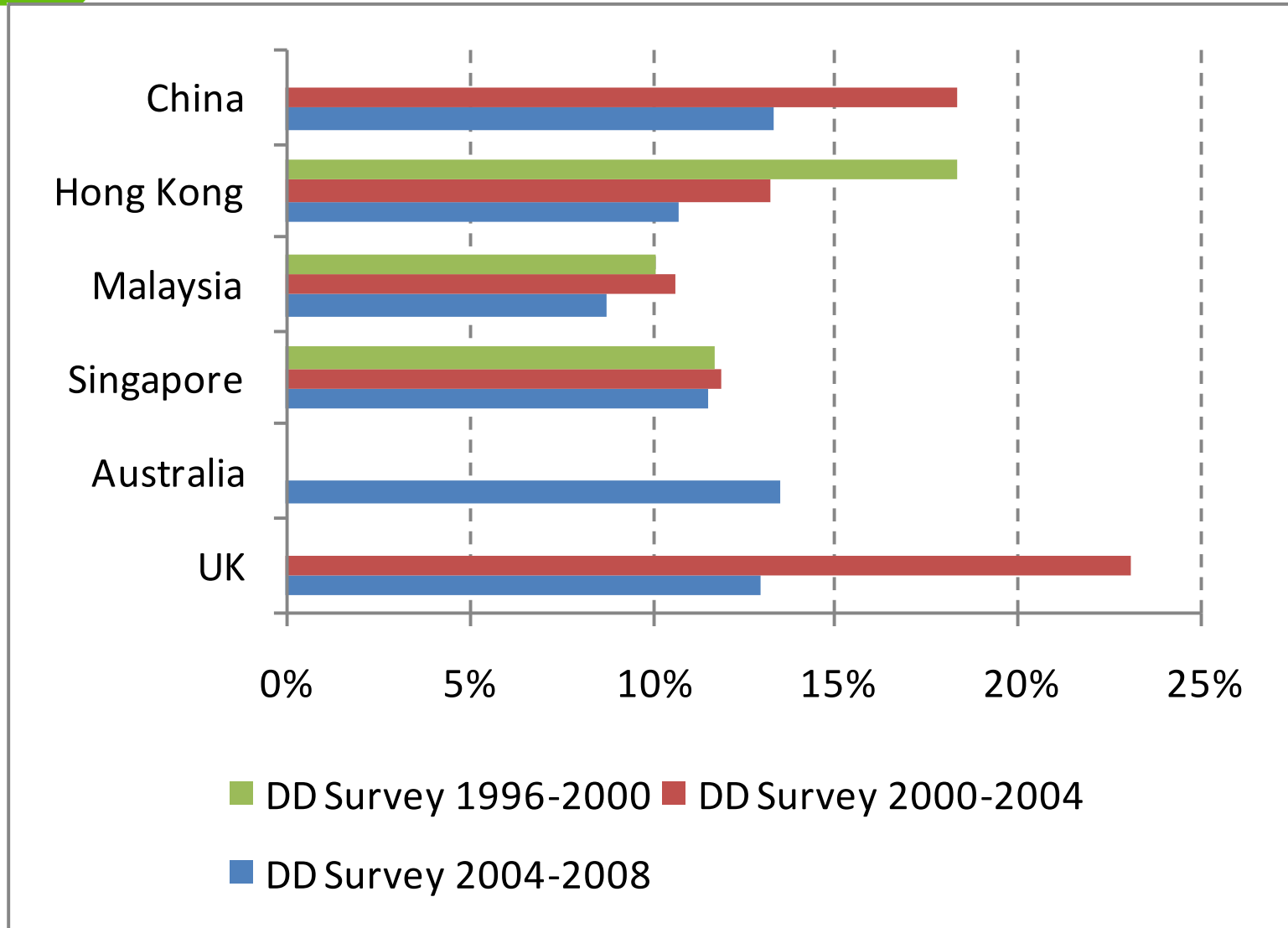
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Number of Claims by Market

All claims collected

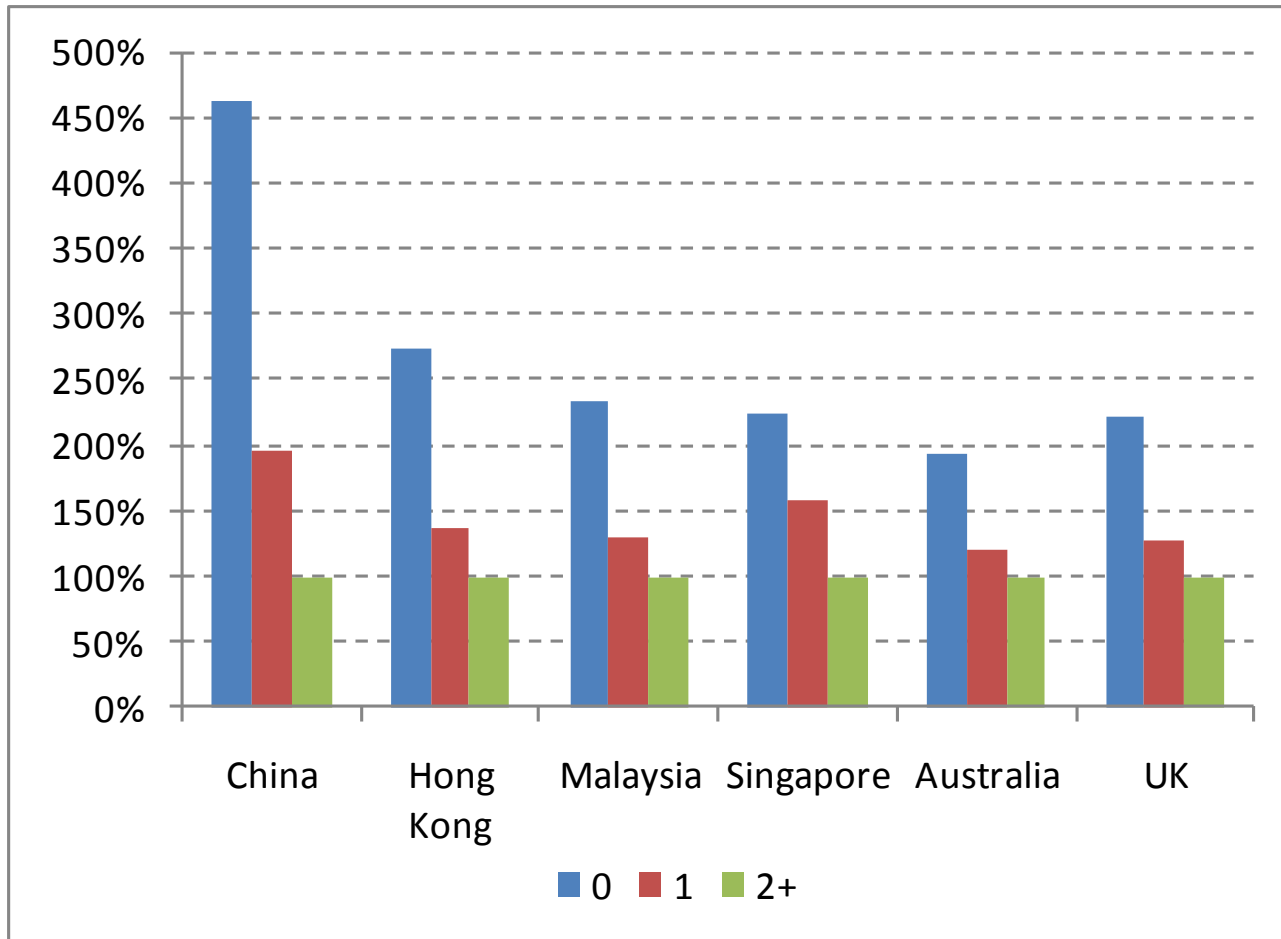
| | Total | China | Hong Kong | Malaysia | Singapore | Australia | Korea | UK | New Zealand |
|-------|--------------|--------------|------------------|-----------------|------------------|------------------|--------------|-----------|--------------------|
| DD | 452,870 | 377,524 | 11,808 | 21,354 | 9,049 | 7,870 | 5,428 | 16,360 | 3,477 |
| Death | 294,427 | 276,095 | 1,646 | 8,934 | 1,284 | 906 | 1,823 | 3,162 | 577 |
| Total | 747,297 | 653,619 | 13,454 | 30,288 | 10,333 | 8,776 | 7,251 | 19,522 | 4,054 |

Declinature Rate by Market

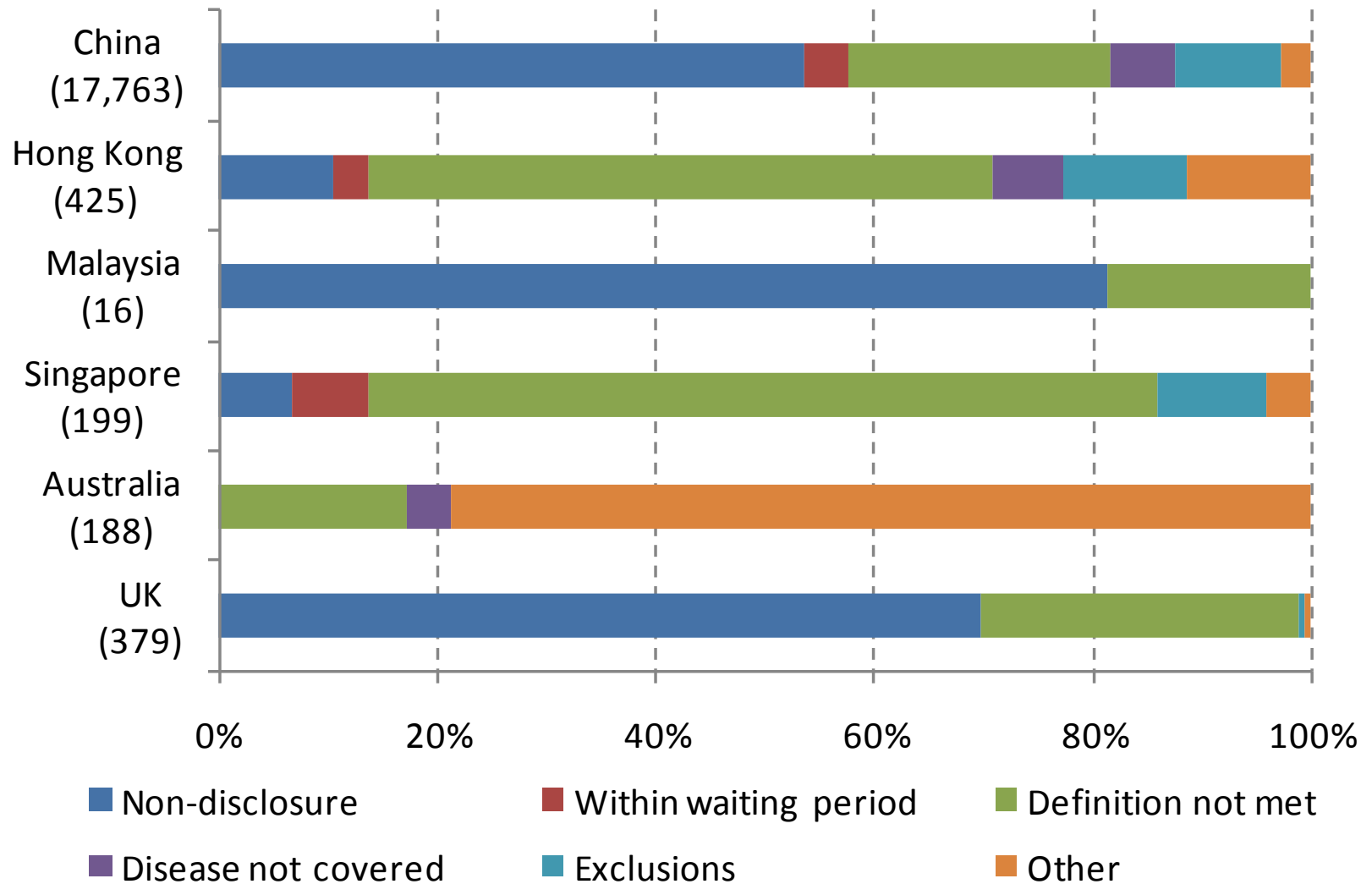


Declinature Rate by Duration

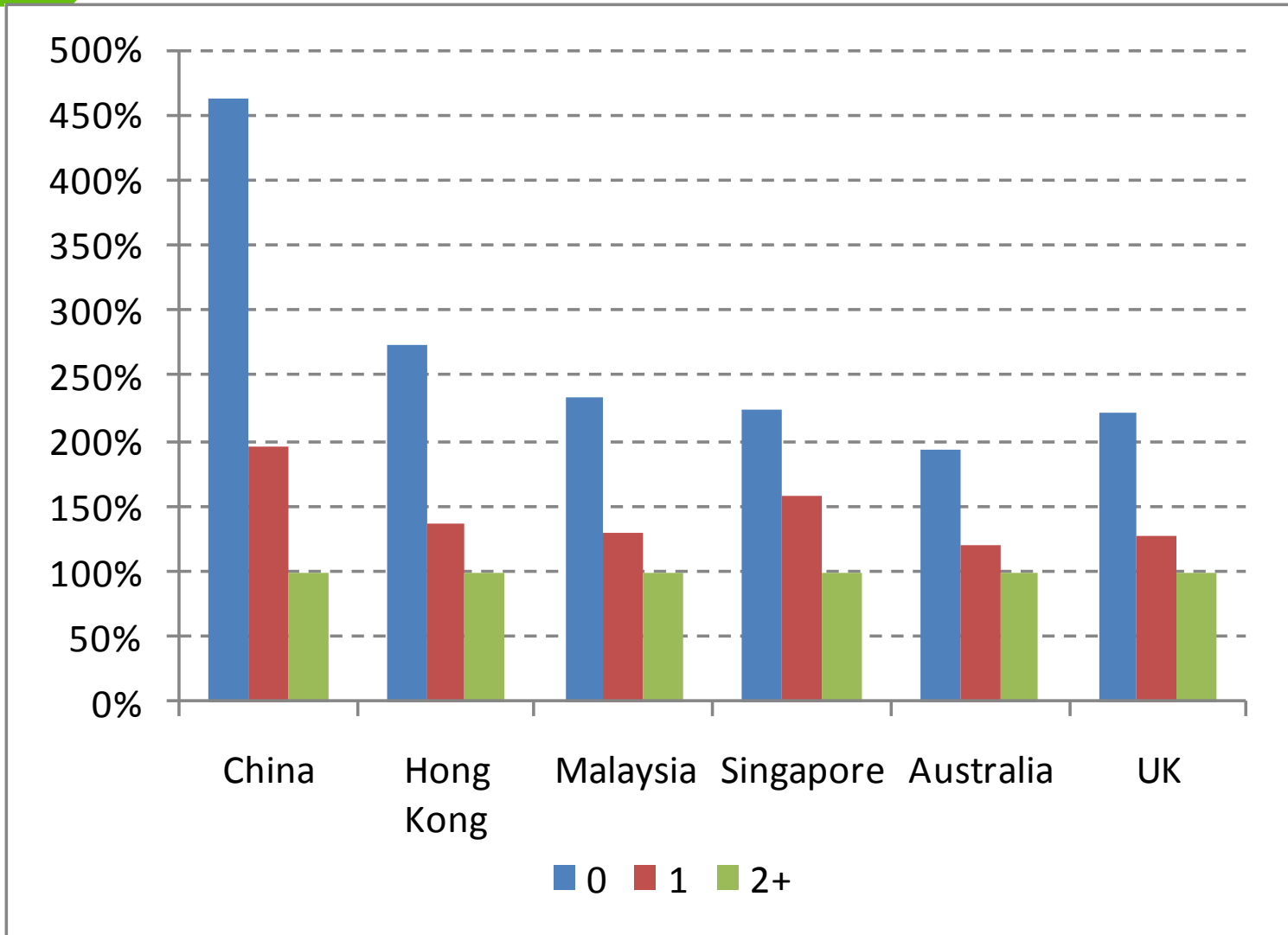
Declinature rate for duration 0 & 1 claims as % of declinature rate for duration 2+ claims



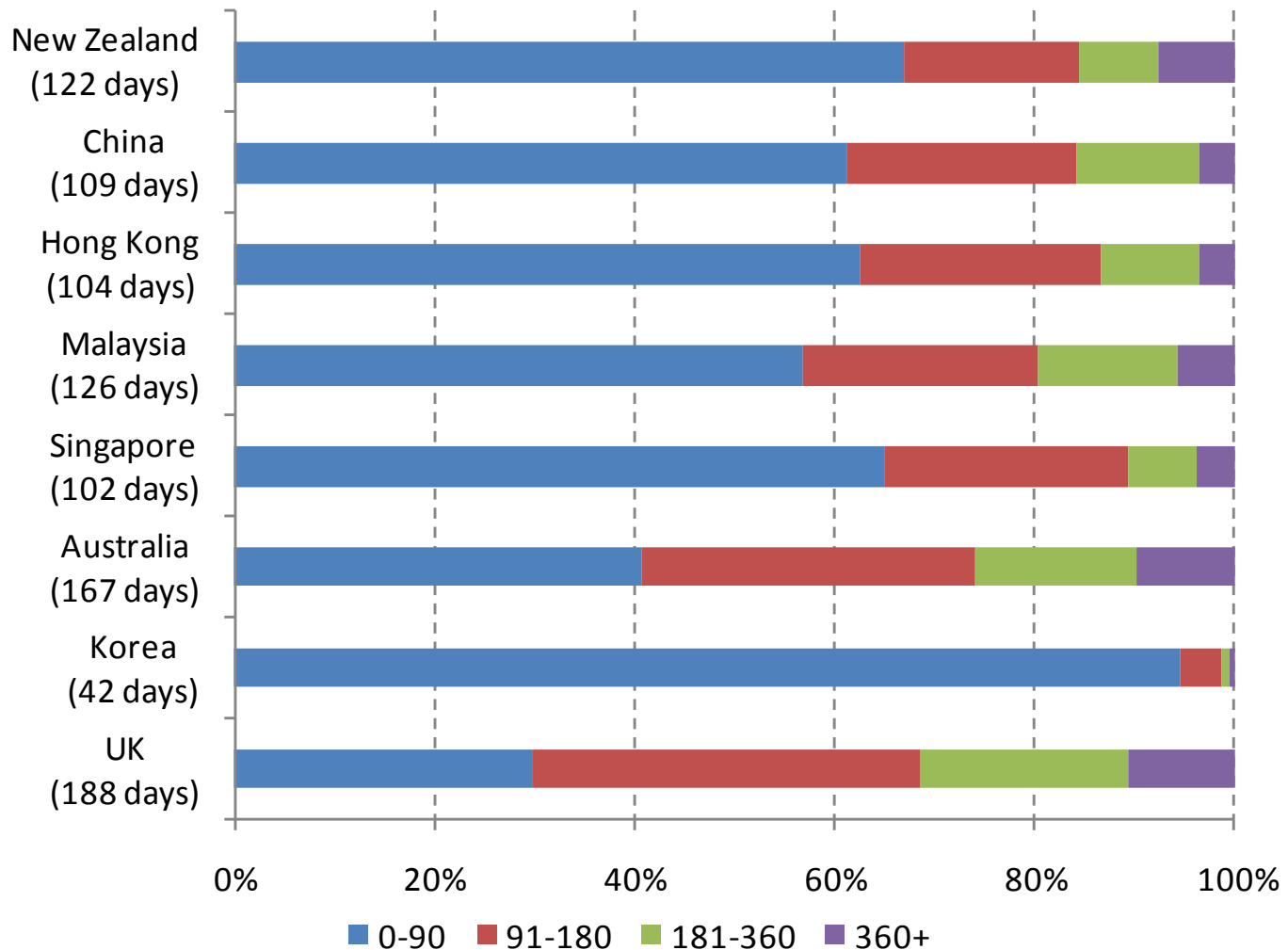
Reasons for Declinature



Percentage of Ex-Gratia Claims by Duration



Number of Days from Diagnosis to Benefit Payment for All Admitted Claims



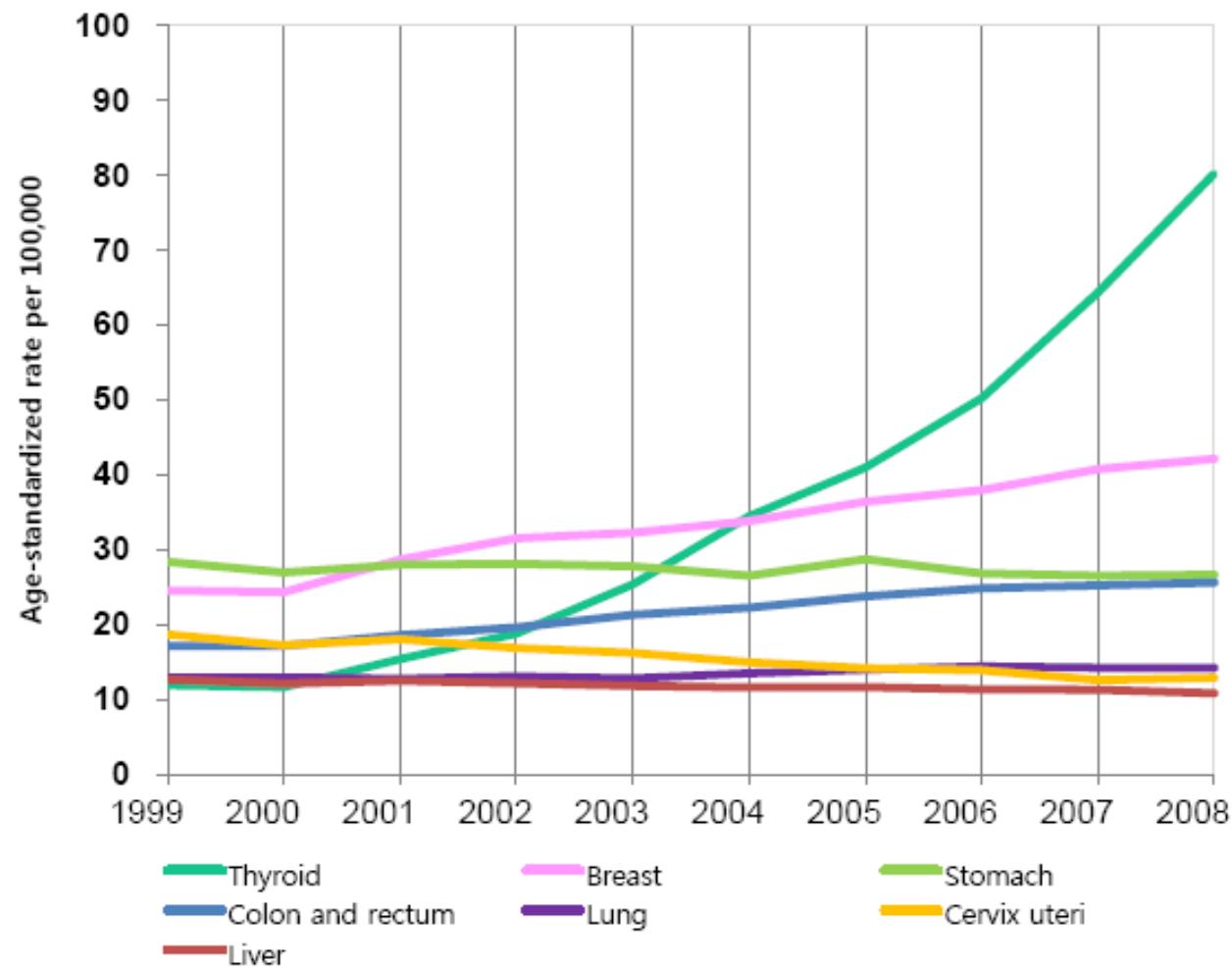
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Methodology

- > Include all claims for
 - Standard lives
 - Traditional type products
 - Some products may cover more diseases than other, range from 5 to 49, most cover 25-35 diseases, all products cover at least cancer, heart attack and stroke
- > All products are treated as 100% acceleration, i.e. exposed to risk ceases when a claim occurs, either as Dread Disease Claim or as Death Claims
- > Only include exposure and claims after waiting period
- > Actual over Expected Ratios (A/E)
 - Number of expected claims are calculated using the graduated incidence rates from the DD survey 2000-2004

Thyroid cancer experience in Korea



| Site | Year | | Annual Percent Change (%) |
|------------------|------|------|---------------------------|
| | 1999 | 2008 | |
| Thyroid | 11.9 | 80.2 | 25.7* |
| Breast | 24.5 | 42.1 | 6.5* |
| Stomach | 28.3 | 26.6 | -0.5 |
| Colon and rectum | 17.1 | 25.6 | 5.2* |
| Lung | 12.9 | 14.2 | 1.5* |
| Cervix uteri | 18.6 | 12.9 | -4.4* |
| Liver | 12.6 | 10.8 | -1.5* |

* P < .05

Age-standardized incidence Rate(ASR) uses "mid-year population in 2000" as standard population.

Source: National Cancer Registration & Statistics 2008, the Korea Central Cancer Registry

Thyroid cancer experience in Korea

- No indication that the increase of the thyroid cancer diagnosis rates has been stabilising
 - Further increases should occur in particular in minor conditions of thyroid cancer
- Age distribution of currently insured portfolios of an obligatory Critical Illness rider is similar to the age structure of newly diagnosed thyroid cancers
 - Companies should hence experience the impact of the deterioration of rates already at this stage
- In South Korea, thyroid cancer makes up a significant proportion of critical illness claims. Mortality from papillary thyroid cancer is very low, but prevalence is approximately 10% (based on post-mortem studies). People are having ultrasounds after buying a critical illness policy and then claiming.

Why has Korea such a bad experience?

Product perspective

- 100% of sum insured needs to be paid for any cancer
 - benefit does not distinguish between minor cancers and severe cancers, company pays 100% of sum insured in both cases.

Medical environment

- Medical technology improvement
- There is a good national health system in Korea
- Medical check up
 - Regular medical check-up is popular
 - Doctors intensively do diagnostic activities such as ultrasonography for thyroid cancer

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Summary

- Dread Disease products continue to sell well
- Sold mainly to 30-40 and children
- High ex-gratia % in China
- High declination rates in Australia
- Stable incidence rates in HKMS
- Increasing incidence rates in China
- Cancer incidence rates increasing
- Significant difference among companies and among regions