Milliman Fulfillment Ratio Index

Reporting year 2019

Understanding fulfillment ratio

Life insurance companies in Hong Kong are required by the Insurance Authority to publish fulfillment ratios for their participating ("par") products on an annual basis starting from January 2017 in compliance with the Guideline on Underwriting Long Term Insurance Business (Other than Class C Business) (commonly referred to as "GL16").

Fulfillment ratio =

$$\frac{\textbf{Actual aggregate non-guaranteed benefits*}}{\textbf{Aggregate non-guaranteed benefits illustrated when customers purchased the policy}}$$

* Either aggregate accumulated bonuses (for annual dividends and reversionary bonuses) or aggregate payout (for terminal dividends).

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Types of non-guaranteed benefits typically offered by participating products in Hong Kong

Annual dividends
Declared and paid out as cash at the end of each year. Policyholders may choose to leave these on deposit with the company to earn interest. The actual interest credited will also affect the fulfillment ratio.

Reversionary bonuses
Bonuses declared as a permanent addition to the basic sum assured of the insurance policy, which cannot be taken away once declared.

Terminal dividend
Typically paid at maturity, on death and surrender of the policy through a lump sum. It is sometimes referred to as the "final bonus".

The Milliman Fulfillment Ratio Index ("Index") – Introduction*

Calculated annually by Milliman, the Index covers Hong Kong life insurance companies representing a significant market share, as measured by in-force premiums (>85% in 2019).

Top 10 life insurance companies in Hong Kong are included based on in-force premiums. The companies included are reviewed annually.

Six material participating products offered by each of the selected companies are analysed. Product types include savings, critical illness, annuity and endowment, with a balance between active and shelved products.

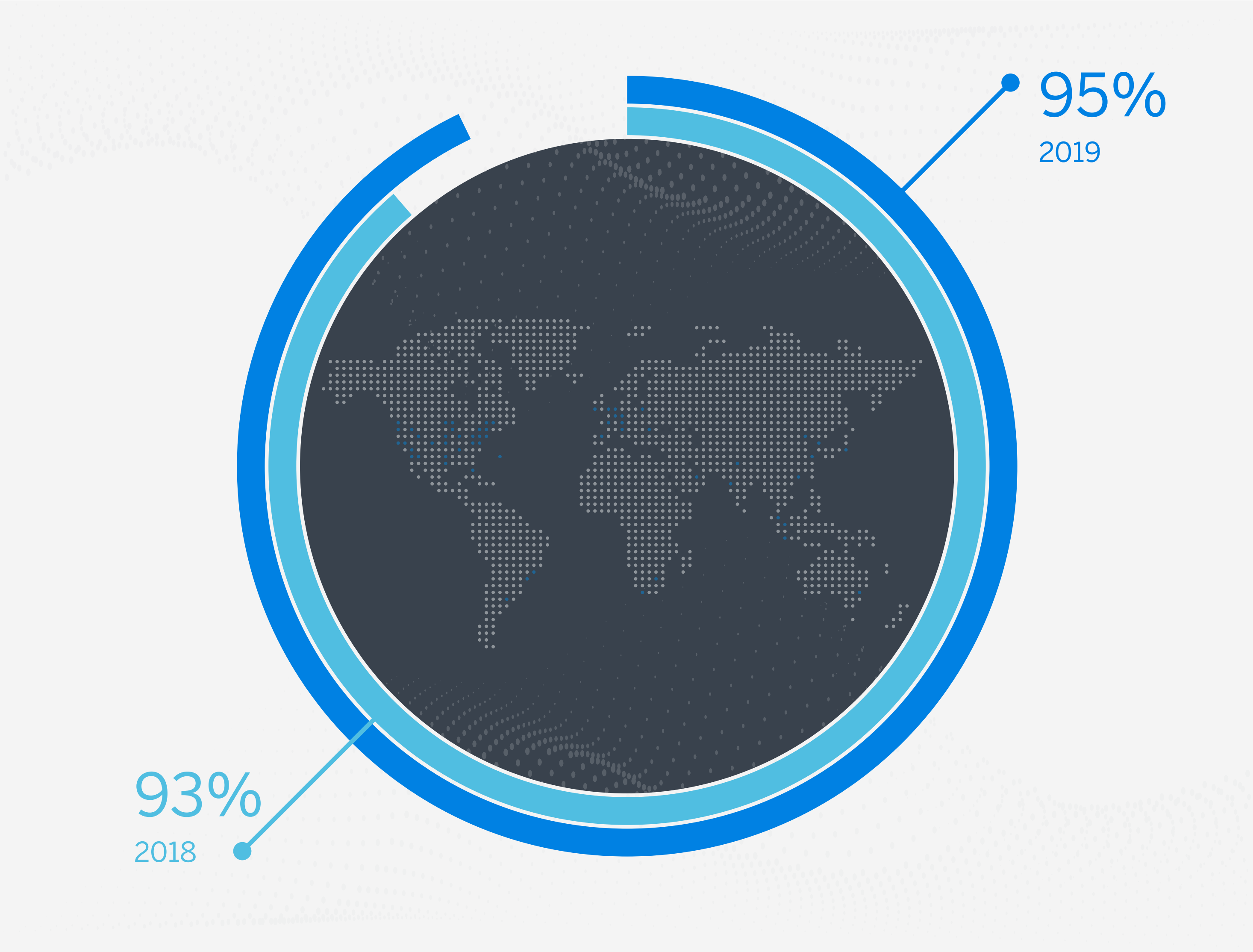
All policy years are considered to better reflect the condition of different cohorts. A simple average is taken across the fulfillment ratios of all policy years available.

The Index reflects actual dividends and bonuses aggregated up to, or paid out in, a calendar year. Some dividend/bonus adjustment decisions made in the same calendar year may not be reflected until the year that the annual dividends/ bonuses or terminal dividends are actually paid out.

Many companies are seen to implement bonus and dividend cuts for older products rather than for their key new products open for sale. The Index is calculated by considering both key new products and older products in order to capture any material changes, based on the fulfillment ratios published by the companies.

Note *
The Index covers participating products only and does not consider universal life products

The Milliman Fulfillment Ratio Index in reporting years 2018 and 2019

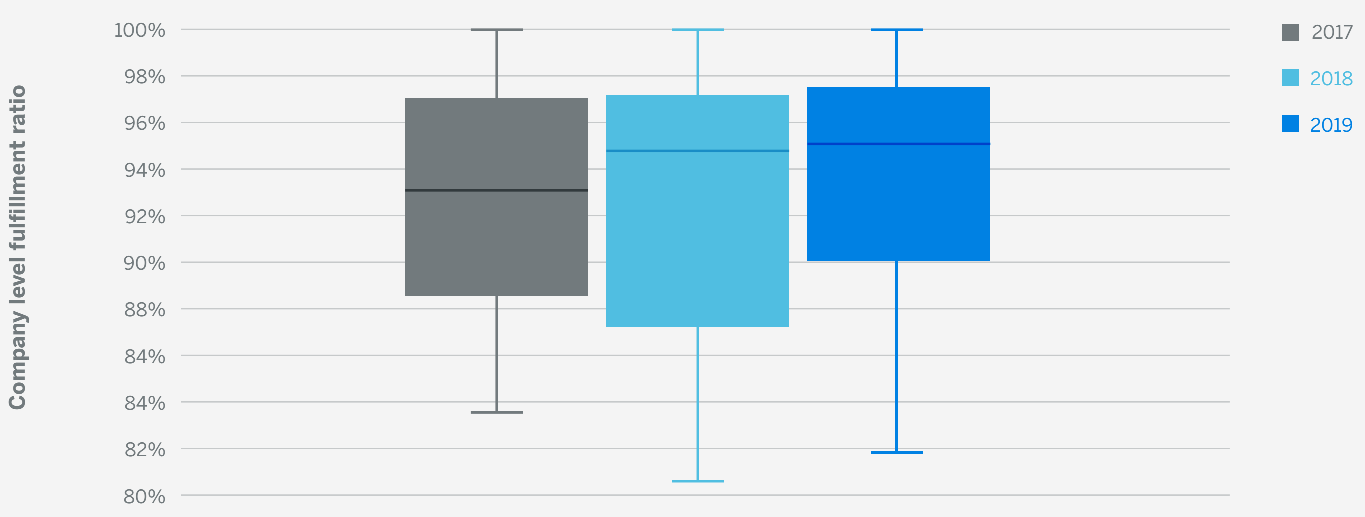


The index has slightly increased from 93% in 2018 to 95% in 2019. Some of the key reasons are listed below:

1. Some insurers have increased policyholder dividends/bonuses for selected products in 2019.
2. For companies where dividends have been cut in the past, the 2019 average product level fulfillment ratio tends to increase as new policies written after previous dividend cuts generally experience a fulfillment ratio of 100%.
3. Most companies have not reduced the non-guaranteed crediting rate for dividends left on deposit (dividend on deposit has been a material component of non-guaranteed benefits illustrated to policyholders for par products sold historically in Kong Kong).
4. Most of the popular high equity par products are still at a relatively early policy year stage and the 2019 fulfilment ratios do not really reflect the increasing non-guaranteed element that is planned to be paid to policyholders in the future.

As a result of lack of publicly available data when this analysis was produced, it is important to note that this Index has not reflected COVID-19 impacts or the impacts of sharply depressed yield curves in 2020 year to date. However, as a result of falls in equity markets and the reduced level of interest rate during 2020, we understand that dividends may be cut by several companies in 2020 dividend declarations, which may reduce the Index for the 2020 reporting year.

A closer look at the distribution of the company-level fulfillment ratios



The above box plot shows the minimum/25th percentile/50th percentile/75th percentile/maximum company-level fulfilment ratio for the 10 selected life insurance companies, determined using the six material participating products offered by each company. Key observations are set out below:

Mean-reverting nature of product-level fulfillment ratios

- Following bonus and dividend adjustments, the fulfillment ratios for the policy cohorts affected by the adjustments would have fulfillment ratios deviating from 100%.
- However, for the new policies written post-dividend adjustments, the fulfilment ratio for these cohorts would typically be at 100% before further dividend adjustments as the fulfilment ratio will be calculated using a new illustrative bonus scale.
- This tends to bring the company-level fulfillment ratios closer to 100% in years where bonuses are not adjusted, which reflects the fact that more policyholders are receiving what have been illustrated at the point-of-sale.

Narrower distribution of company-level fulfillment ratios

- In general, there are more data points where fulfilment ratios are closer to 100%. This is due, in part, to management actions put in place by companies to help smooth any bonus/dividend volatility and ensure a more stable and predictable bonus/dividend payment to policyholders.
- In addition, some companies have further segmented their par product portfolio into smaller cohorts, and have subsequently removed fulfilment ratios of products closed to new business for more than 5 years and experiencing potentially lower fulfilment ratios.

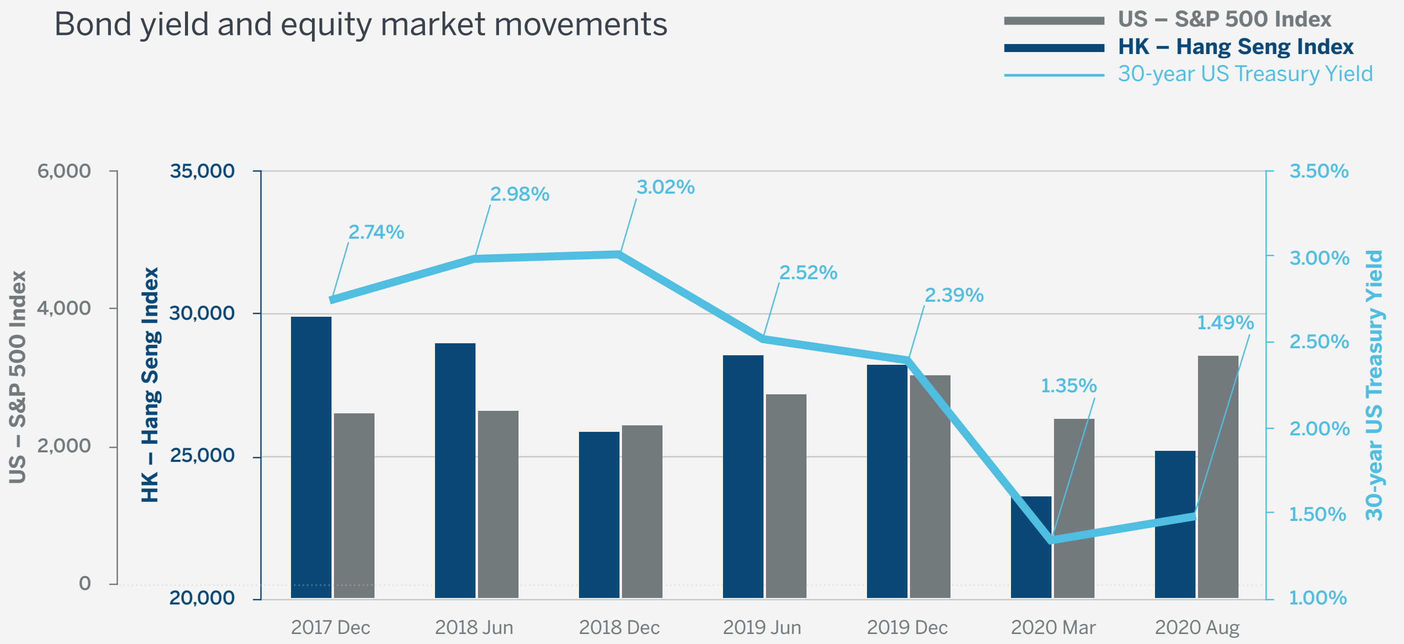
Company-level fulfilment ratios capped at 100%

- The highest company-level fulfillment ratio observed is 100% for each reporting year over the 2017- 2019 period.
- Although some companies have disclosed fulfilment ratios higher than 100% for certain products/cohorts, at a company level, this is offset by other par products with lower fulfillment ratios.
- Given the risk of a prolonged low interest rate environment and depressed equity markets, the scope for increasing non-guaranteed benefit is expected to be limited. This may reduce the number of data points in the future where cohort/product level fulfilment ratios are higher than 100%.

Fulfillment ratio key drivers

- Decisions on dividend and bonus declarations are typically based on a number of factors including investment outlook, actual investment performance, operating experience and competitive pressures. The investment-related factors tend to be systematic, whereas the other factors can be more company-specific.
- Some insurers that increased bonuses and dividends for certain products in their 2019 declarations may have based their decision on the expectation of equity market increases in the first half of 2019, despite the drop in interest rates over the same period. Other insurers are likely to have used their investment surpluses to prepare for future adverse situations by way of smoothing mechanisms.
- Following the outbreak of the COVID-19 pandemic in early 2020, many equity markets have fallen and fixed interest yields dropped significantly in the first quarter of 2020. Whilst some equity markets subsequently rebounded to an extent (especially technology stocks), yield curves have remained depressed, which makes it extremely challenging for insurers to maintain current bonus and dividend levels.
- Insurers who have entered into hedging programs to protect against adverse interest rate movements may have been able to lessen the impact to their par funds, but others may be forced to cuts bonuses and dividend scales in their 2020 declarations if smoothing accounts have reached the threshold stipulated by their bonus and dividend policies.

Bond yield and equity market movements



Apart from the decisions by companies to adjust bonus and dividend scales, which is a key driver of the changes in fulfillment ratios, there are other factors that would cause fluctuation in reported ratios, such as:

- The fulfillment ratios of policyholders who have experienced bonus and dividend cuts are likely to keep declining over time due to compounding effects, as they continue to receive more of the reduced bonuses and dividends.
- For policyholders leaving cash bonuses with insurers to accumulate interest, the interest generated brings the fulfillment ratio closer to 100%, as many insurers have left deposit interest rate unchanged in recent years.
- Older cohorts/products can be left out of disclosures when there is no new business for that cohort for 5 years, causing fluctuations.
- Bonus revisions and dividend cuts are usually declared in the middle of a year, whereas fulfillment ratios are disclosed by calendar year. This causes different results among policyholders who purchase their insurance plans in the same year.

About Milliman

Milliman is a leading consultant to the insurance industry, advising most of the world's largest insurers.

We combine more than 70 years of risk expertise with advanced data analytics and market-leading technology solutions to help our clients:

- navigate increasingly volatile markets;
- drive product innovation and efficiency;
- protect assets from complex and interconnected risks;
- create groundbreaking solutions to some of society's greatest challenges.

With offices across the globe, we have in-depth knowledge of the local regulations in every market we serve, and we actively invest in research to keep our clients one step ahead in a rapidly changing world.

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Milliman

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