

US Mortality Solutions

Acquired block management

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Historical results Hannover Re US - L&H

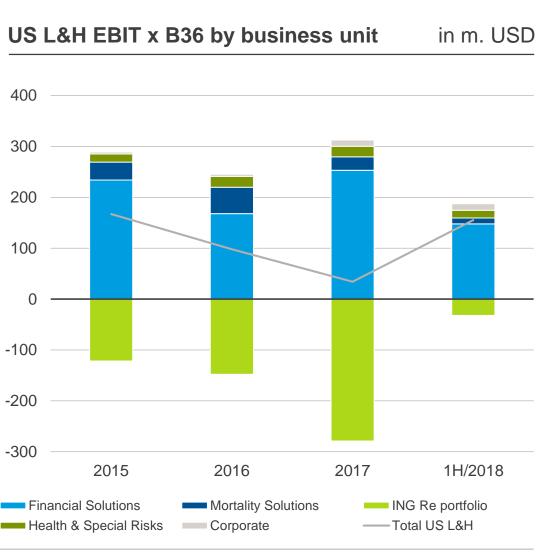
- Hannover Re: a top-tier provider of
 - financial
 - mortality

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and health risk solutions

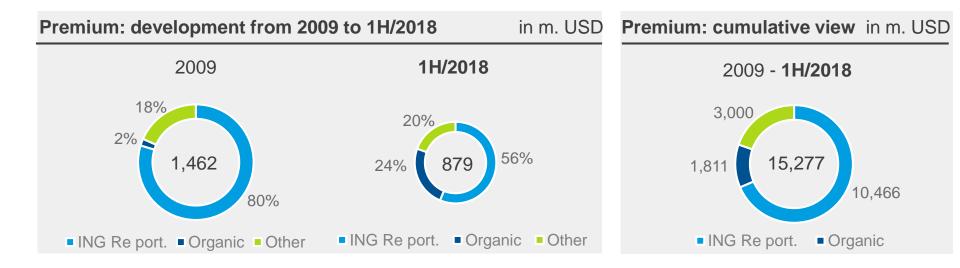
in the US life and health R/I market

- EBIT US business group
 2015 1H/2018: USD 450 m.
- EBIT contribution 2015 1H/2018 without the block of business acquired in 2009 (ING Re portfolio): ~ USD 1 bn.



Historical results of US Mortality Solutions US L&H business

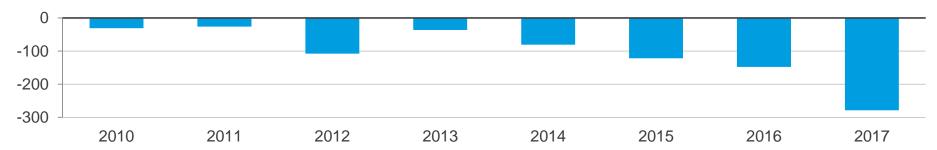
- US Mortality Solutions business unit: organically written business, the ING Re portfolio, and other block acquisitions incl. the pre-2009 legacy business
- Organic business and other acquisitions outside of the ING Re portfolio have met our profitability targets
- Shift from ING Re portfolio to organic business



Historical results of US Mortality Solutions cont'd US L&H business

- ING Re portfolio acquired via retrocession from ING (now Voya); legal entity: Security Life of Denver (SLD)
- 2009: positive results; since 2010: EBIT losses every year
- Total EBIT contribution: loss of ~USD 500 m.
 - excl. allocated mgmt. expenses from inception of transaction

ING Re portfolio EBIT x B36 x alloc. exp.



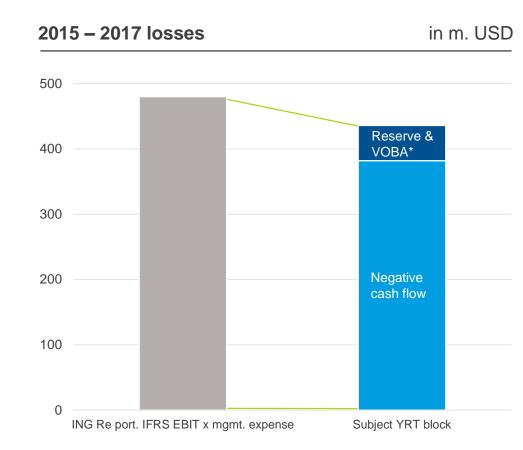
- Losses reduced through active steering
 - Current annual collateral costs reduced to ~USD 1 m. from >USD 30 m. USD 665 m. savings on PV basis
 - First targeted rate actions in 2013. Worth ~USD 500 m. on PV basis
 - Organic new business written since 2009 contributing USD 240 m. of EBIT excl. allocated mgmt. expenses from 2009 through 1H/2018. PV of profit embedded in organic business as at Q2/2018: USD 1.3 bn.

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in m. USD

Historical results of US Mortality Solutions cont'd US L&H business

- ING Re portfolio includes:
 - Coinsurance
 - Yearly renewable term (YRT) business originally reinsured by ING Re in the late 1990's through 2004
- YRT business:
 - Most significant portion of losses
 - Greatest exposure to older ages, permanent products, and long-term population trends



* Value of business acquired



What went wrong? US L&H business

US market dynamics

- Late 1990's and early 2000's: high cession rates and lower quality of medical UW compared to today
- Selective lapses, turnover due to preferred UW and declining prices
- Higher realised cost of options such as conversions
- "Table shaving"

Aggregate mortality improvements

- Lower than expected; driven by socio-economic effects
- Heart and stroke improvements have slowed materially
- Opioid misuse and accidental deaths have increased
- Top income groups fare materially better, but less at the oldest ages

Result

Higher prospective mortality and rate deficiencies, largest at oldest ages

All SLD YRT rate increases US L&H business

- 1st May: rate increase notifications sent to all YRT treaties by Hannover Re US as 3rd party administrator of Security Life of Denver (SLD). SLD belongs to Voya group and is the entity facing clients for ING Re portfolio
- Rate increases targeted to address prospective deficiencies. Significant increase on …
 - ... single life business attained ages 80 and above
 - ... all joint life business
- Contractual limitations apply on some treaties
 - For example, rate increase will automatically take effect for certain treaties if or when the ceding company has raised cost of insurance charges on underlying policies
- Recapture options included as part of rate increases with 90 days for the ceding company to notify of their decision

All SLD YRT rate increases - structure US L&H business

Long-term commitment Developing mutually profitable relationships in the US market, even through challenging times

Alternative options

Extra-contractual recapture options provided to demonstrate seeking appropriate overall rate increase rather than 'windfall' profit recouping past losses

Clear communication

Rate increases based off of recent credible cash experience as reported directly by ceding companies



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Contractual requirements & best legal advice

Fully compliant with our legal and contractual rights, duties and obligations following best legal advice at every stage

Manageable administrative complexity

Rate increases structured to minimise ceding company implementation issues

Consistency with all ceding companies

Requirements to raise rates consistently across all ING Re YRT business pervasive in treaties from this era. Increases carefully applied consistently to meet all contractual requirements

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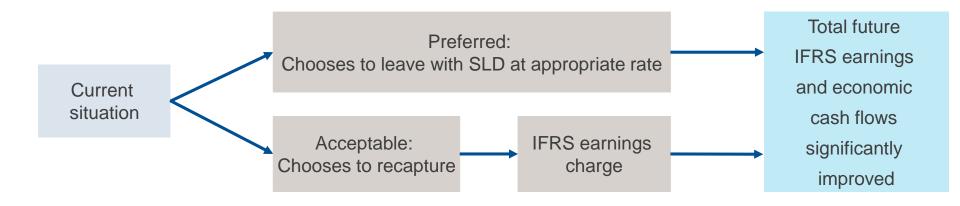
All SLD YRT rate increases - timelines US L&H business

- Notifications: 767 treaties with 101 company groups
- Confirmed receipt: all company groups



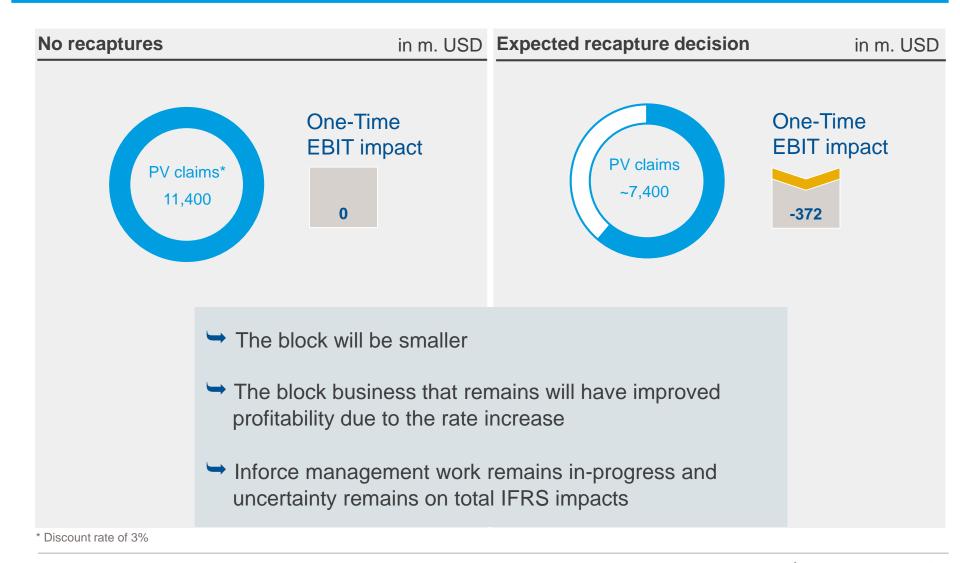
All SLD YRT rate increases - dynamics US L&H business

- Economic outcome is improved in aggregate whether the ceding company chooses to:
 - recapture when the block becomes smaller, or
 - leave business with us when the prospective rates are more appropriate



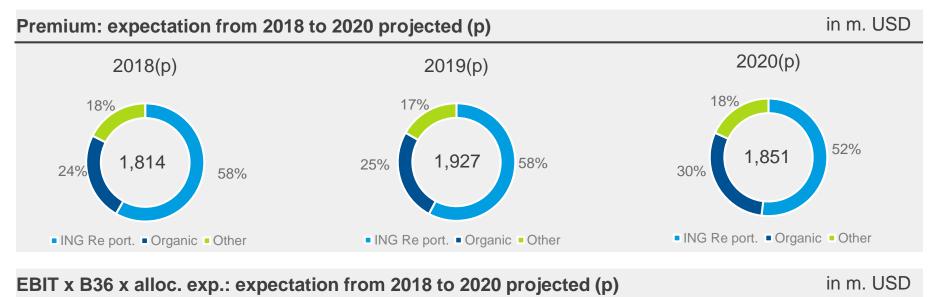
 Recaptures can lead to IFRS losses even though economic results improve because ING Re portfolio has to be accounted for under the lock-in principle (Purchase GAAP Accounting)

2018 recapture charges and size of remaining block US L&H business



Forward-looking expectations US L&H business

▶ We expect USD 372 m. of adverse recapture charges, included in 2018 projected below





Risks US L&H business

Risks associated with IFRS income and IFRS/Solvency II balance sheet valuation of the subject block of business and current rate actions:



- Individual ceding company decisions to recapture or accept the rate increases cannot be predicted with certainty
- Some ceding companies may pursue arbitration as a route to resolve; based on legal advice received we are confident in our contractual rights
- Forward-looking statements depend on future mortality assumptions including population improvement trends, which are inherently uncertain

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