Insights into life and health reinsurance

Metrics in business and reporting

Claude Chèvre, Member of the Executive Board

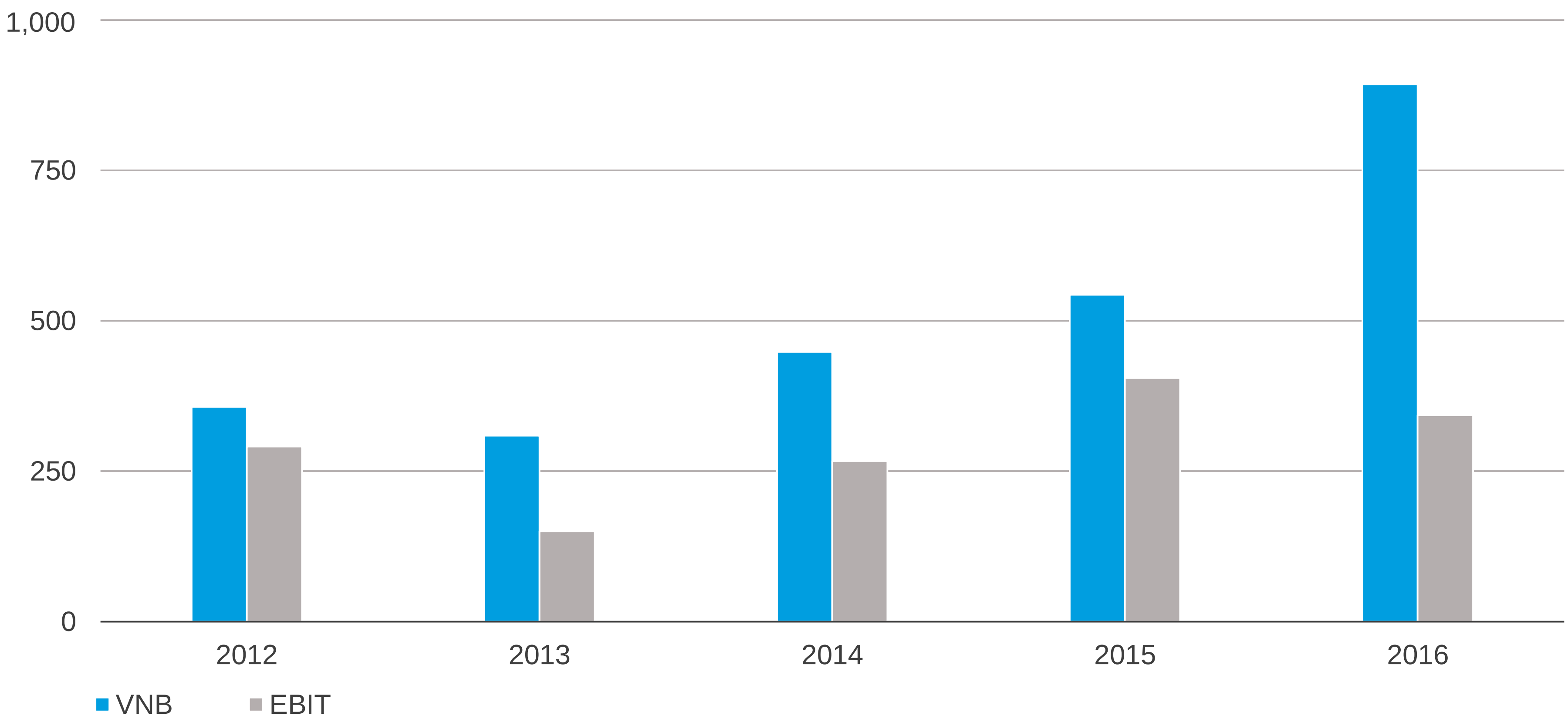
20th International Investors' Day
Frankfurt, 19 October 2017

hannover **re**®

How does VNB translate into EBIT?

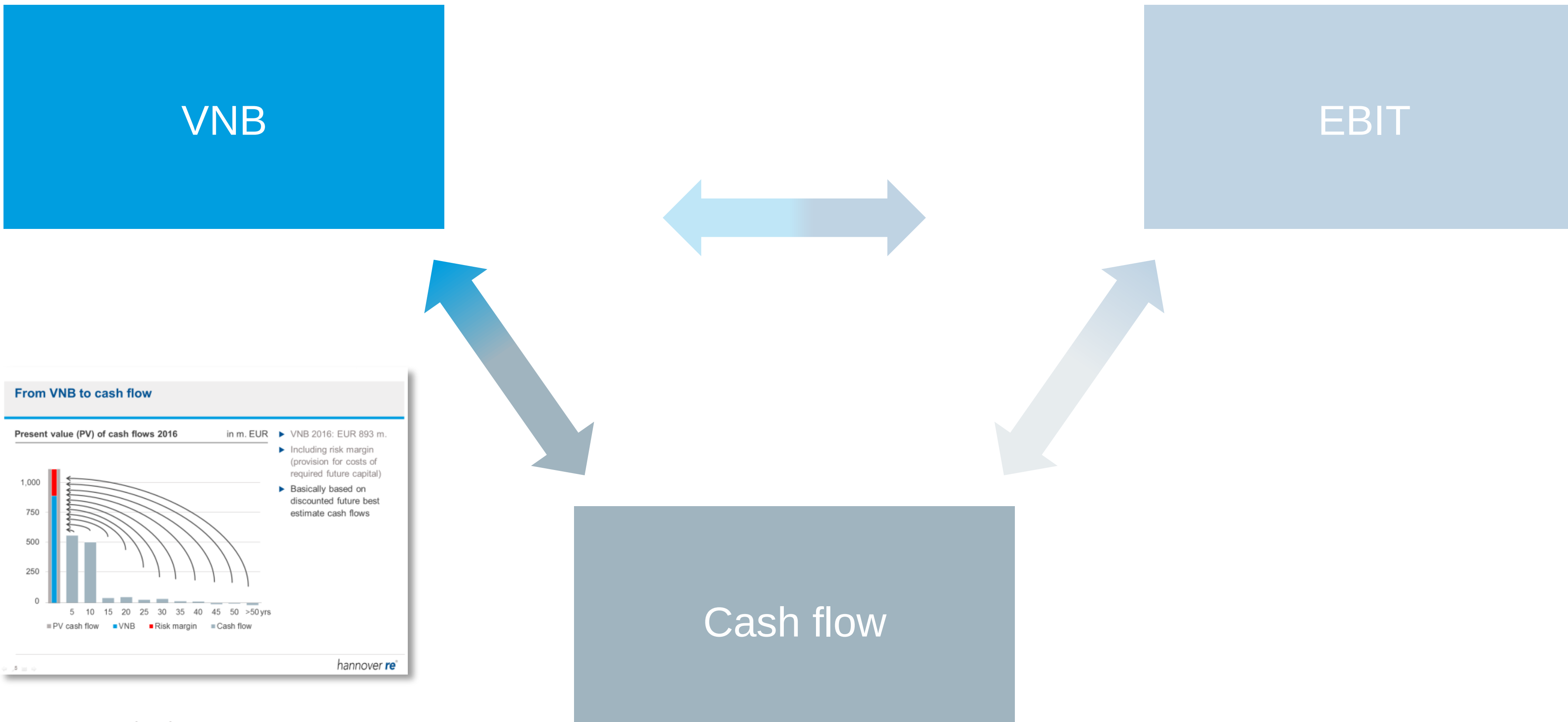
VNB & EBIT: 2012 - 2016

in m. EUR



EBIT on IFRS basis, VNBs not directly comparable due to several changes in methodology

Three perspectives
How does VNB translate into EBIT?



EBIT on IFRS basis

From VNB to cash flow
Modifications in the calculation since 2014

- Value of New Business (VNB)
  - Present value (over the full duration) of the new business written within one year
  - Costs for required capital (CoC) included

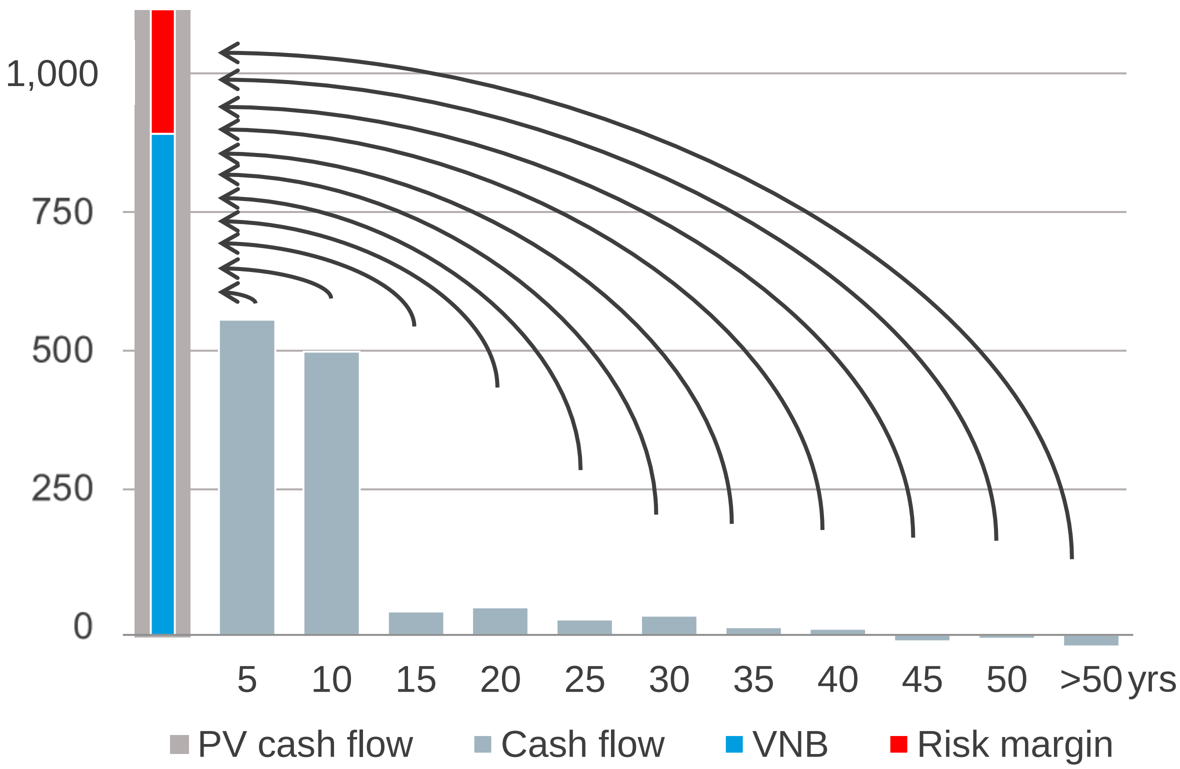
Definitions have changed over the last years

Until 2015	As of 2016	From 2021 onwards
Part of **MCEV** reporting	Based on **SII** reporting	Currently addressing implications of **IFRS 17**
Local statutory results	Cash flows	Impact on future VNB definition not yet clear
Post-tax	Pre-tax	
4.5% CoC* (CoRNHR)	6% CoC (Risk Margin)	

* In 2015 already 6%

From VNB to cash flow

Present value (PV) of cash flows 2016 in m. EUR

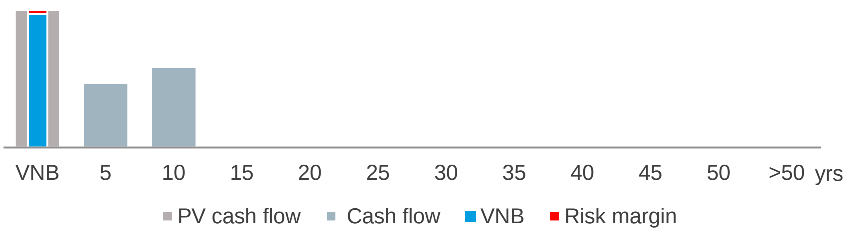


- VNB 2016: EUR 893 m.
- Including risk margin (provision for costs of required future capital)
- Based on discounted future best estimate cash flows
- > EUR 1 bn. of cash flows are expected to emerge within the first 10 years

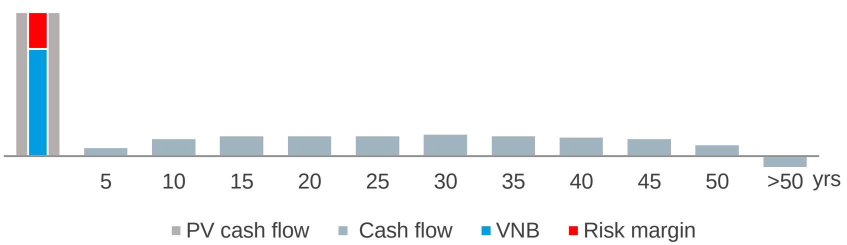
From VNB to cash flow

Cash flow pattern 2016 by main sources

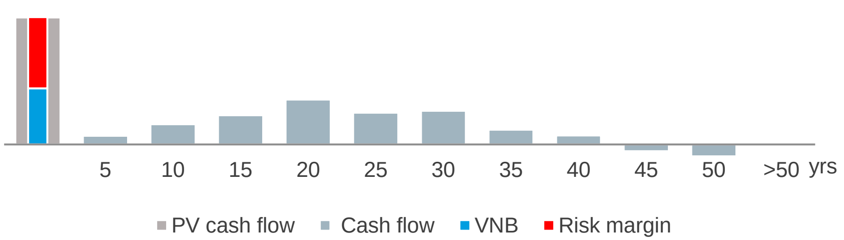
Financial solutions fee deals



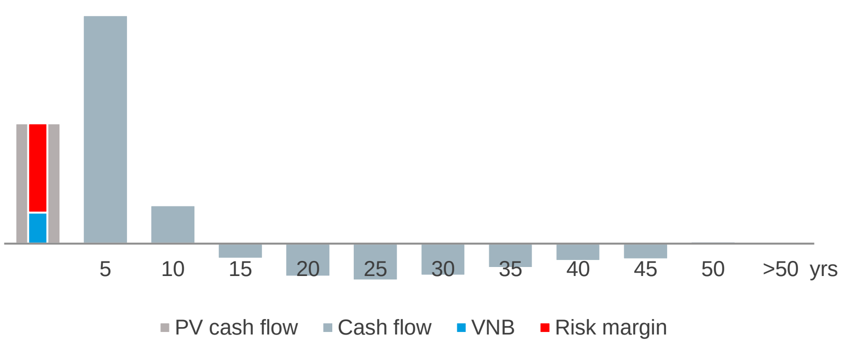
Longevity RPATs*



US mortality new business



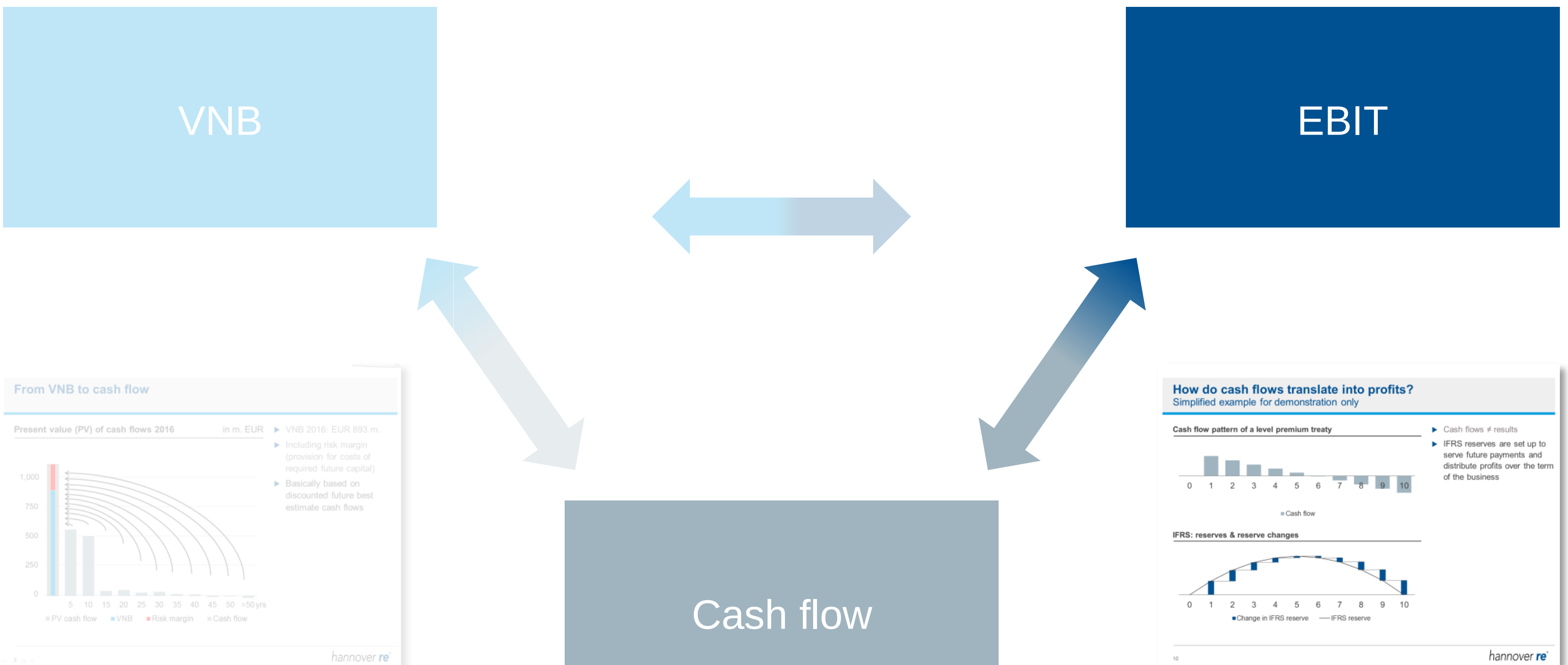
Others



All pattern have been scaled to the same PV cash flow level for better comparability

* On a gross basis

Three perspectives
How does VNB translate into EBIT?

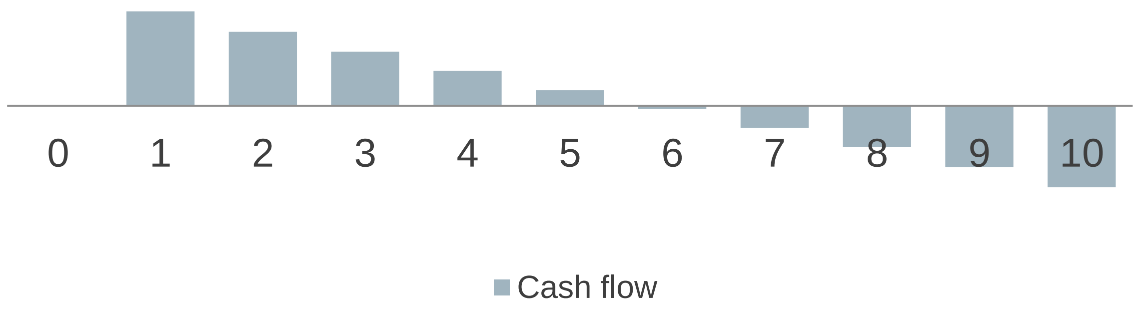


EBIT on IFRS basis

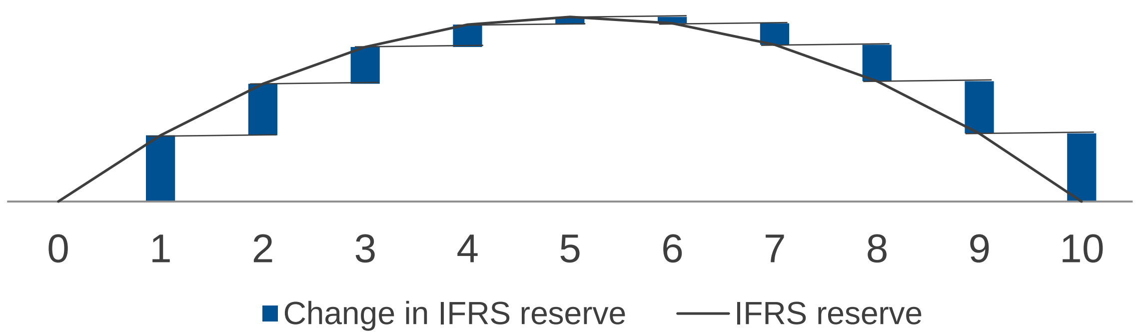
hannover re®

How do cash flows translate into profits?
Simplified example

Cash flow pattern of a level premium treaty



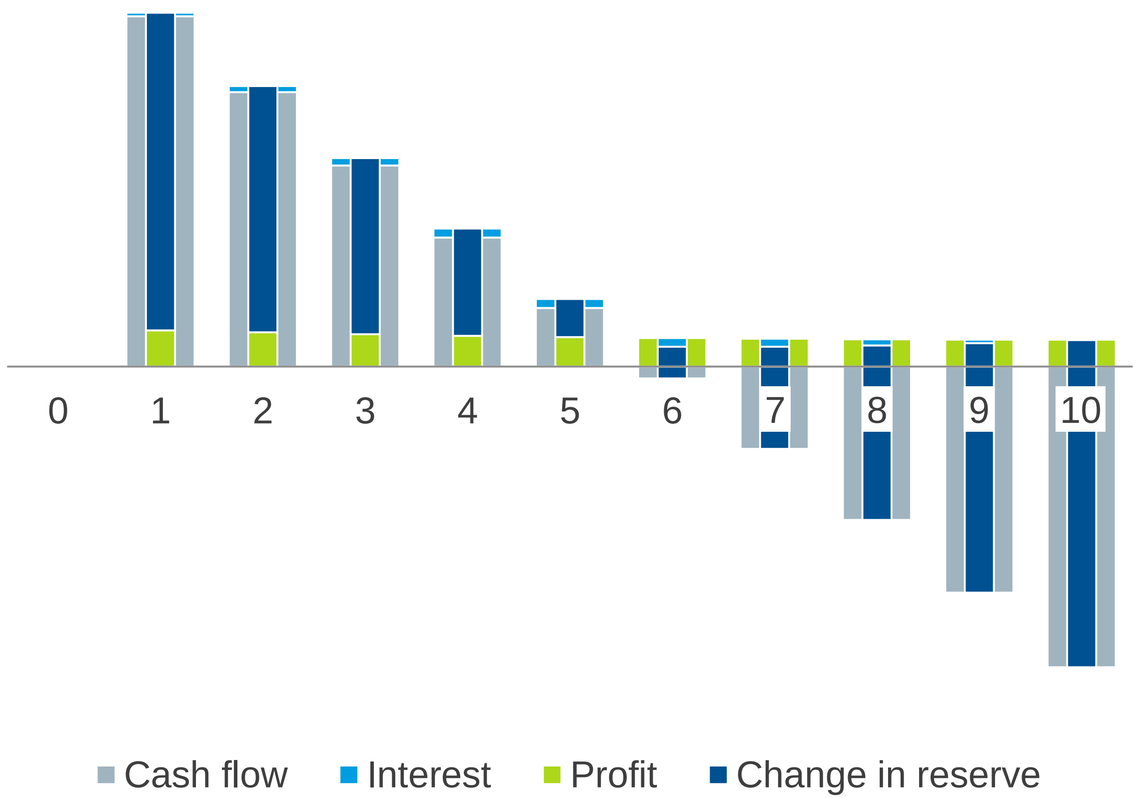
IFRS: reserves & reserve changes



- Cash flows ≠ results
- IFRS reserves are set up to serve future payments and distribute profits over the lifetime of the business

How do cash flows translate into profits?
Simplified example

Cash flows, change in reserve and interest



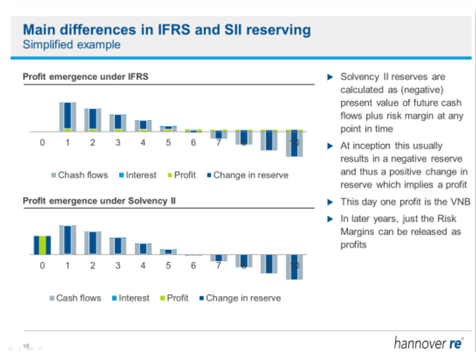
- Cash flows ≠ results
- IFRS reserves are set up to serve future payments and distribute profits over the lifetime of the business
- Reserve changes need to be deducted from the cash flows
- Additionally, interest income is earned on the reserves
- IFRS profits calculated as the sum of cash flows & interest on reserves minus change in reserve in each year

hannover re®

Three perspectives

How does VNB translate into IFRS EBIT?

VNB



EBIT

Cash flow

EBIT on IFRS basis

Main differences between IFRS and Solvency II reserving

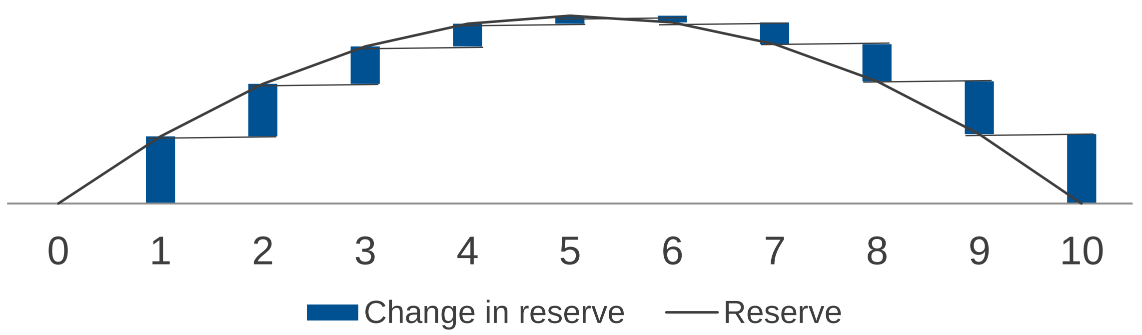
IFRS		Solvency II
US GAAP standard	Basis	Solvency II standard
Over time	Profit realisation	Mainly at inception as VNB
Locked-in* (+ Loss recognition test)	Assumptions	Best estimate at any time
Provision for adverse deviations	Margins	Explicit risk margin
Yes	DAC	No
Locked-in* earned rate	Interest rates	Floating EIOPA interest rate curve

* Under FAS60

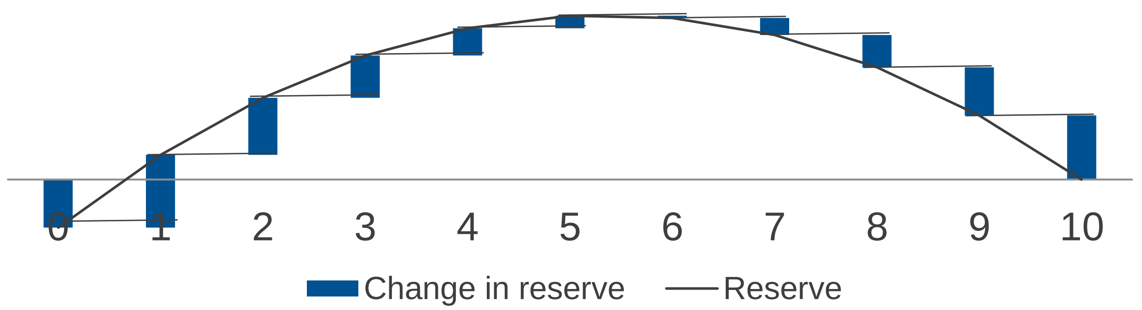
Main differences in IFRS and Solvency II reserving

Simplified example

IFRS: reserves & reserve changes



Solvency II: reserves & reserve changes



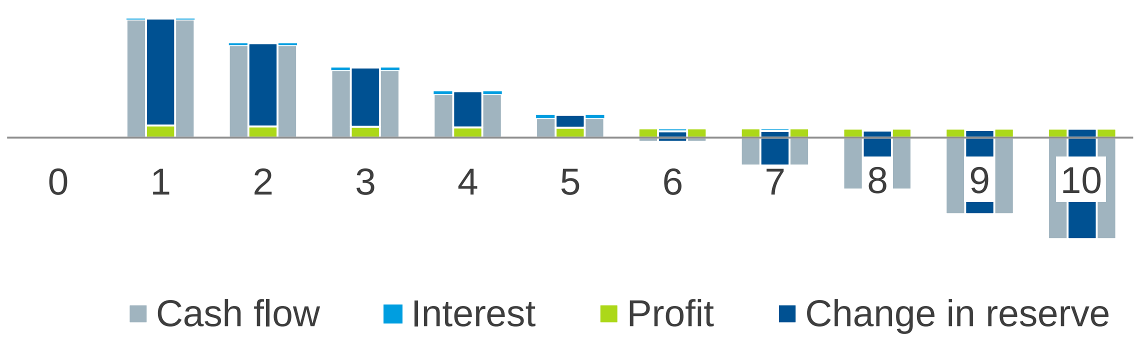
- Cash flows are generally the same
- Solvency II reserves are only set up to serve future payments, not to distribute profits
- They are calculated as the (negative) present value of future cash flows plus risk margin at any point in time
- At inception this usually results in a negative reserve

hannover re®

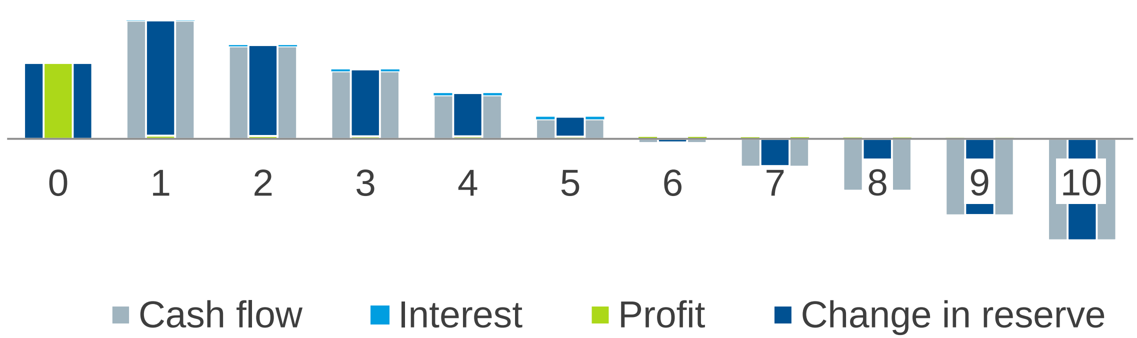
Main differences in IFRS and Solvency II reserving

Simplified example

IFRS: profit emergence



Solvency II: profit emergence



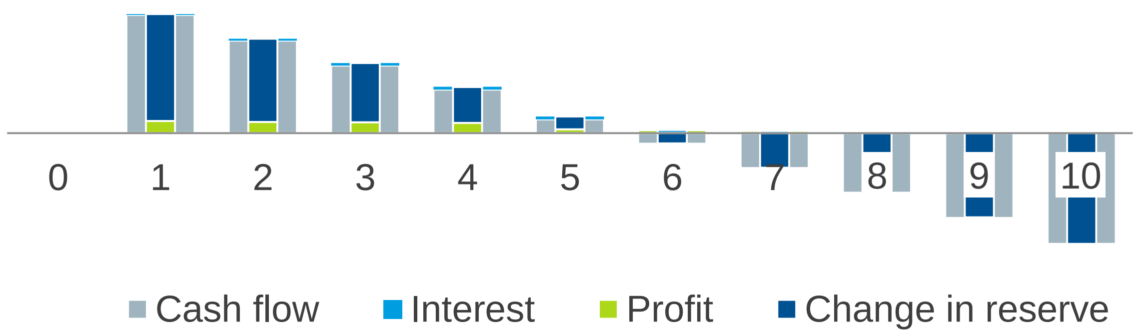
- Cash flows are generally the same
- Solvency II reserves are only set up to serve future payments, not to distribute profits
- They are calculated as the (negative) present value of future cash flows plus risk margin at any point in time
- At inception this usually results in a negative reserve
- As reserve changes are deductible, this means a day 1 profit, which is the VNB
- Thereafter, only the risk margins are released as profits

hannover re®

Main differences in IFRS and Solvency II reserving

Scenarios: Negative assumption change in year 5

IFRS: profit emergence

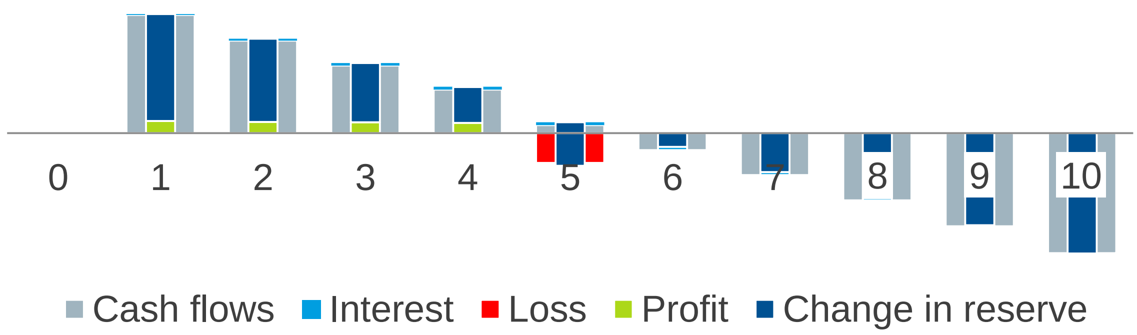


Solvency II: profit emergence

- Negative assumption changes will not impact IFRS results as long as reserves are still sufficient
- As most profits have already been realised under Solvency II, losses will incur directly

Main differences in IFRS and Solvency II reserving
Scenarios: Further negative assumption change in year 5

IFRS: profit emergence



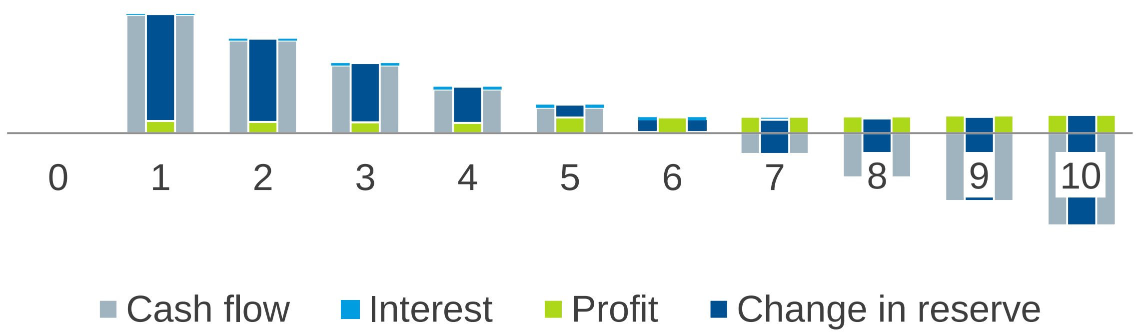
Solvency II: profit emergence

- Negative assumption changes will not impact IFRS results as long as reserves are still sufficient
- As most profits have already been realised under Solvency II, losses will incur directly
- If reserves are not sufficient, there is also a loss recognition under IFRS. All future profits are set to 0

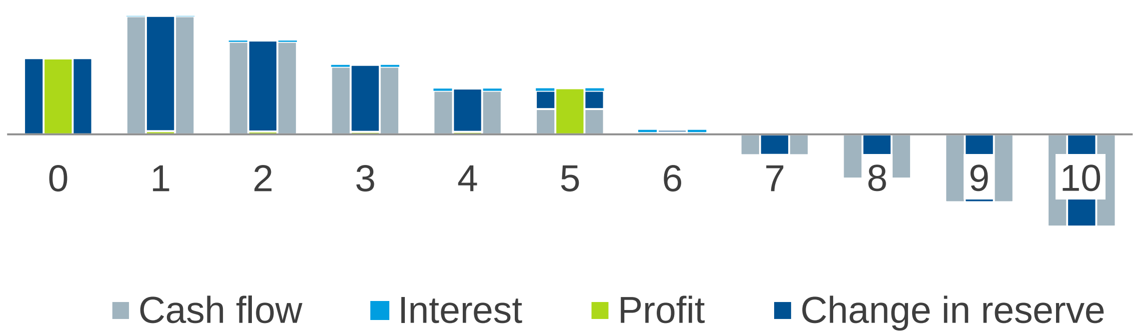
Main differences in IFRS and Solvency II reserving

Scenarios: Positive assumption change in year 5

IFRS: profit emergence



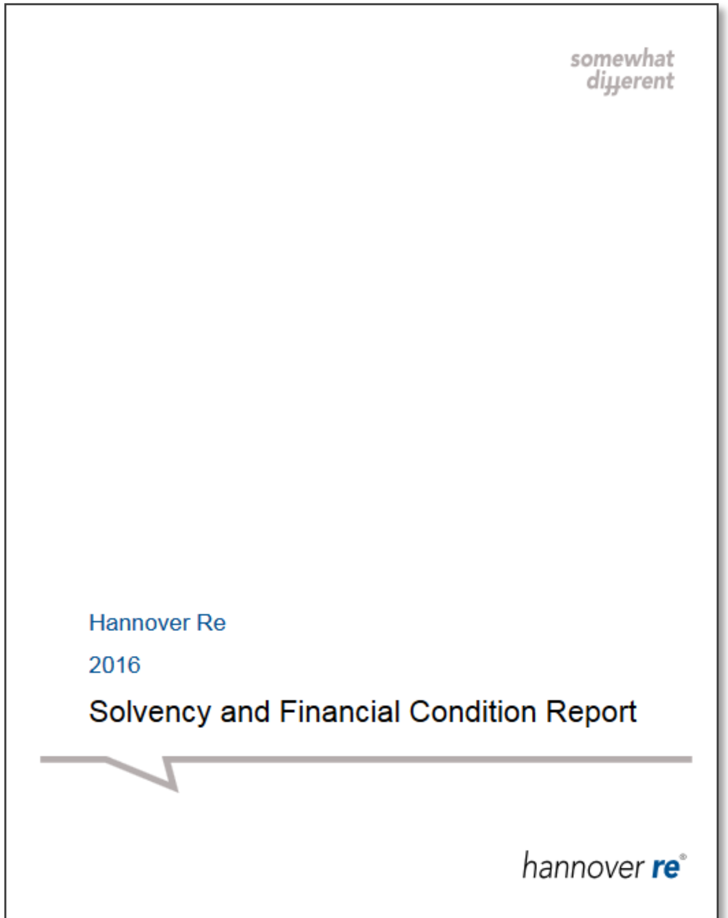
Solvency II: profit emergence



- Negative assumption changes will not impact IFRS results as long as reserves are still sufficient
- As most profits have already been realised under Solvency II, losses will incur directly
- If reserves are not sufficient, there is also a loss recognition under IFRS. All future profits are set to 0
- Positive assumption changes are shown as single-year profit under Solvency II
- Under IFRS reserves remain locked-in and profits are realised over time

hannover re®

Transition from VNB into expected EBIT
For new business 2012 to 2016


somewhat different

Hannover Re

2016

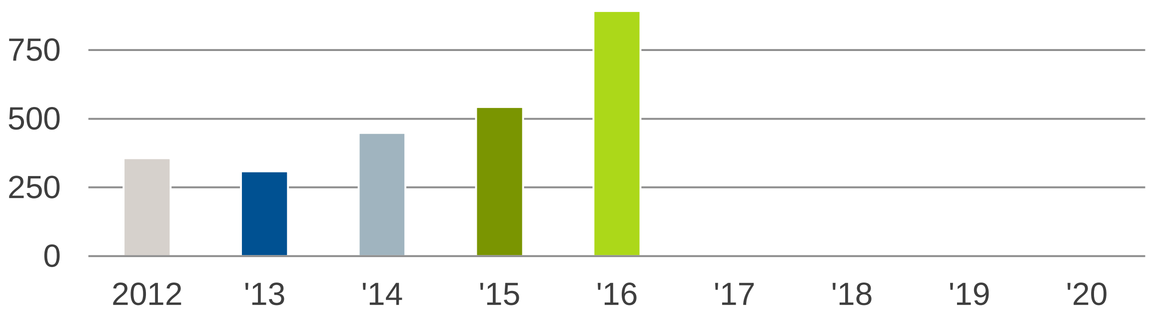
Solvency and Financial Condition Report

hannover re®

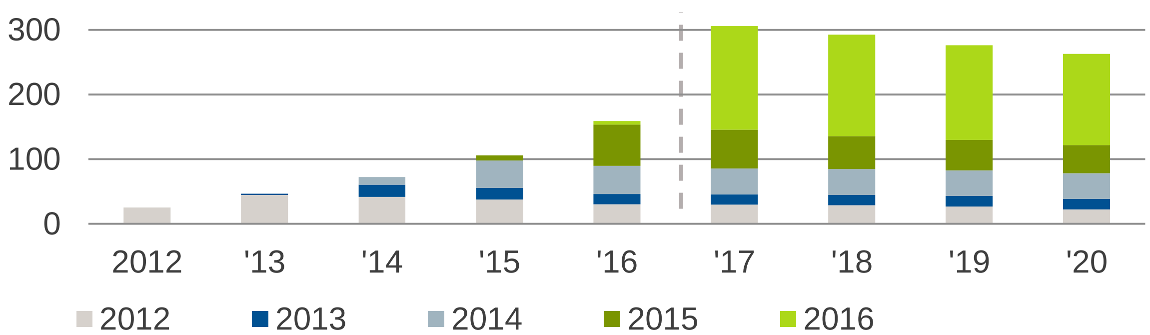
- The reality is more complex than shown on the previous slides and examples:
  - Cash flow definitions are slightly different
  - Contract boundaries are slightly different
  - Treatment of f/x-rates can be different
- A comprehensive transition of the Solvency II Technical Provision into IFRS liabilities can be found in the "Solvency and Financial Condition Report" available on our website
- On the following slides we have undertaken the transition from VNB into expected annual IFRS EBITs for the new business years 2012 to 2016

Transition from VNB into expected EBIT
Split by years

VNB: 2012 - 2016 in m. EUR



Expected VNB contribution to EBIT in m. EUR

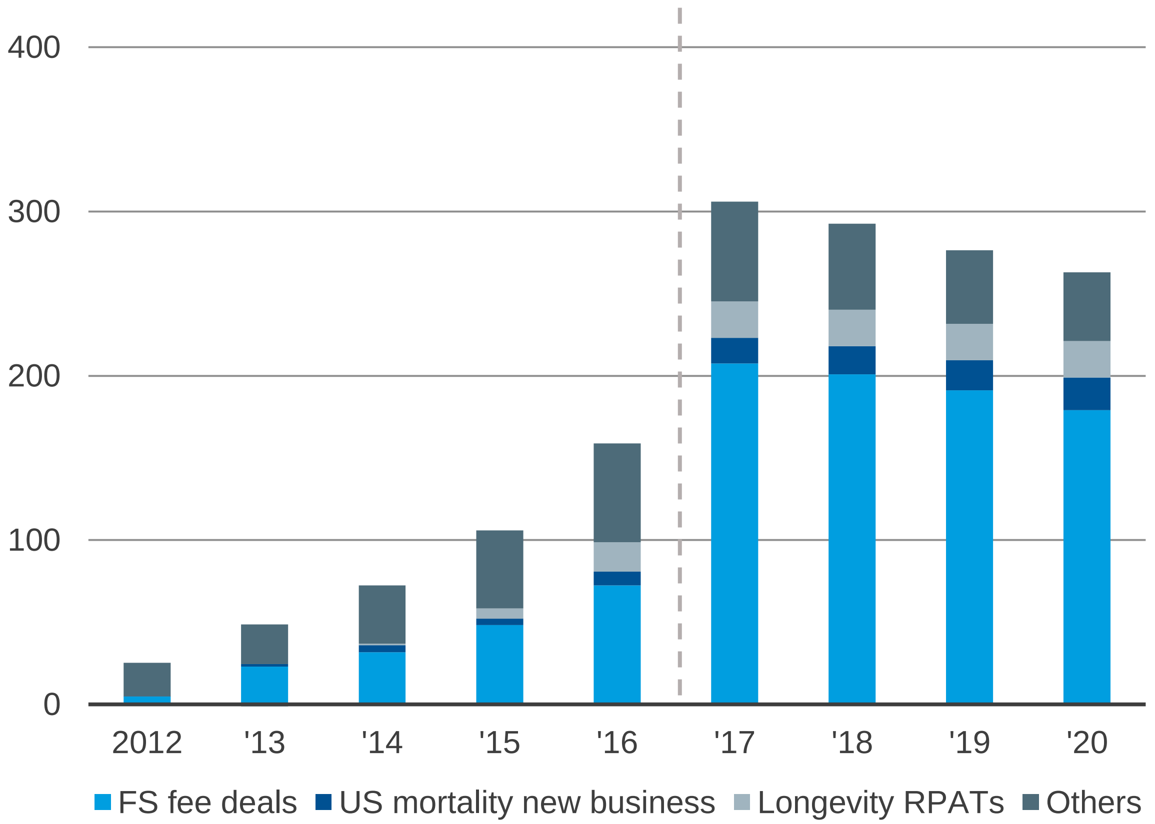


- Strong 2016 VNB contribution to EBITs, mainly based on extraordinary financial solutions new business
- Each new business year adds a new layer of expected profit streams

EBIT on IFRS basis

Transition from VNB into expected EBIT
Split by sources

Expected VNB contribution to IFRS EBIT in m. EUR



- Strong 2016 VNB contribution to EBITs, mainly based on extraordinary financial solutions new business
- Each new business year adds a new layer of expected profit streams
- Financial Solutions fee deals represent the largest part of the near-term profits
- Profits of the other main business segments emerge over longer durations

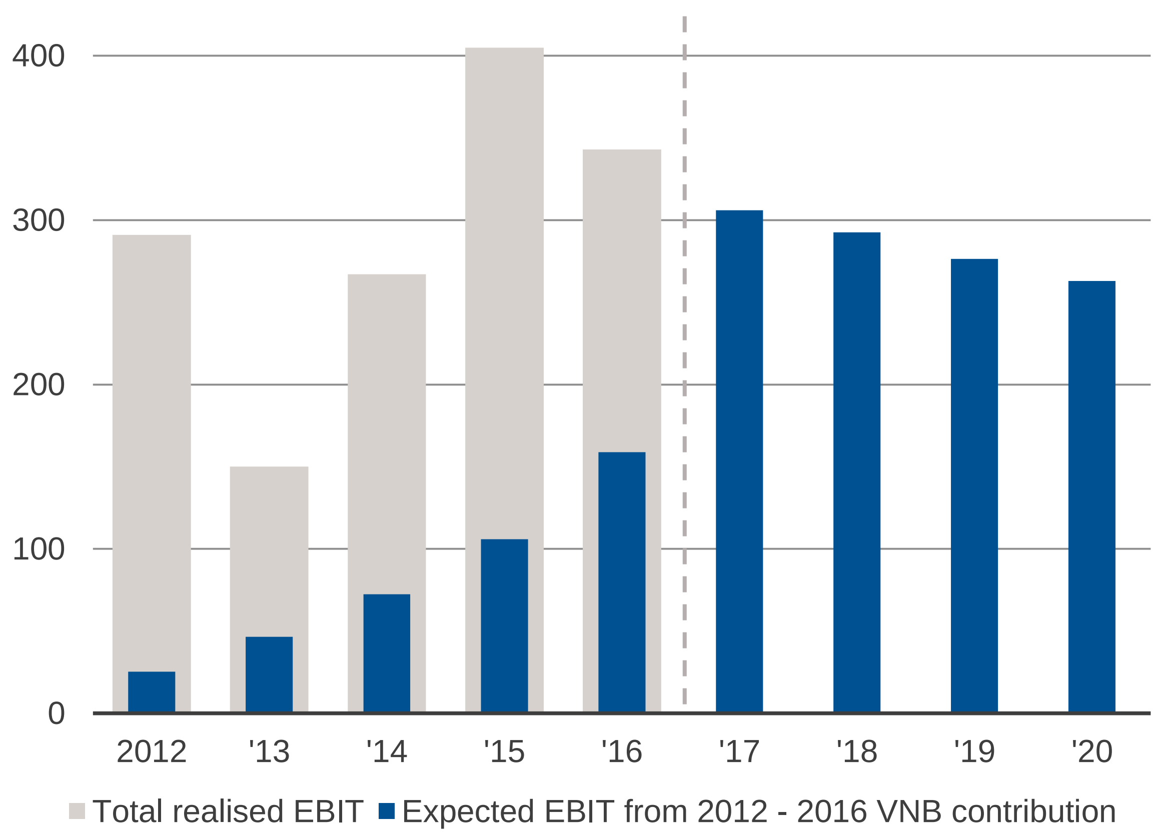
EBIT on IFRS basis

hannover re®

Transition from VNB into expected EBIT

Expected VNB contribution and past realised EBITs

Expected contribution and realised EBIT in m. EUR



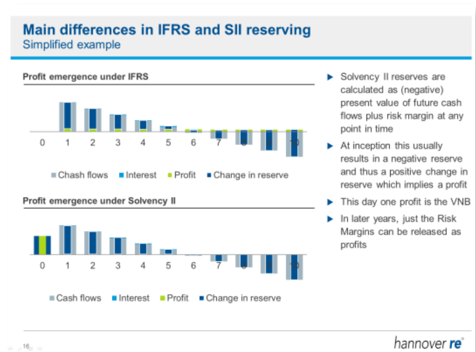
- Strong 2016 VNB contribution to EBITs, mainly based on extraordinary financial solutions new business
- Each new business year adds a new layer of expected profit streams
- Financial Solutions fee deals represent the largest part of the near-term profits
- Profits of the other main business segments emerge over longer durations
- New business of the last 5 years represents a growing share of the L&H EBIT

EBIT on IFRS basis

hannover re®

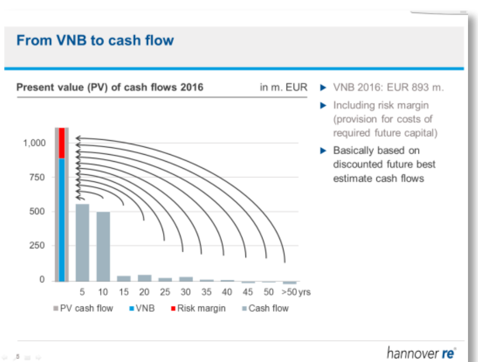
Three perspectives

How does VNB translate into IFRS EBIT?

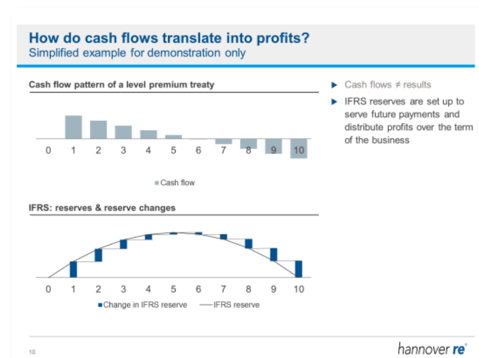


VNB

EBIT



Cash flow



EBIT on IFRS basis

hannover re®

Outlook

Where do we expect the future VNB?

Risk solutions

Provide terms and capacity for all types of technical risks.

Financial solutions

Achieve financial objectives for our clients.

Reinsurance services

Meet the individual needs of our clients.

Our strategic focus

1. High-growth markets
2. Companies in transition
3. Alternative distribution channels
4. Underserved consumers
5. Hard-to-quantify risks

hannover re®

Disclaimer

This presentation does not address the investment objectives or financial situation of any particular person or legal entity. Investors should seek independent professional advice and perform their own analysis regarding the appropriateness of investing in any of our securities.

While Hannover Re has endeavoured to include in this presentation information it believes to be reliable, complete and up-to-date, the company does not make any representation or warranty, express or implied, as to the accuracy, completeness or updated status of such information.

Some of the statements in this presentation may be forward-looking statements or statements of future expectations based on currently available information. Such statements naturally are subject to risks and uncertainties. Factors such as the development of general economic conditions, future market conditions, unusual catastrophic loss events, changes in the capital markets and other circumstances may cause the actual events or results to be materially different from those anticipated by such statements.

This presentation serves information purposes only and does not constitute or form part of an offer or solicitation to acquire, subscribe to or dispose of, any of the securities of Hannover Re.