

# Swiss Re's SONAR

## Improving the top line with emerging risk sounding



**In 2000 the Chief Risk Officer of  
Swiss Re asked**

General Public Release

**What will be  
the next  
asbestos?**

# Trigger: many insurance industry defining losses were not about pricing!

Instead, we missed billion dollar developments (evident in hindsight):

- Tobacco, Asbestos
- Environmental Liability (Schweizerhalle, MTBE)
- Supply chain issues (Flood Thailand, Kobe Earthquake)
- Tailing dam failures (Brazil, Doñana, Theiss)
- Explosions (AZF Toulouse, Deepwater Horizon, Tianjin)
- Financial crisis

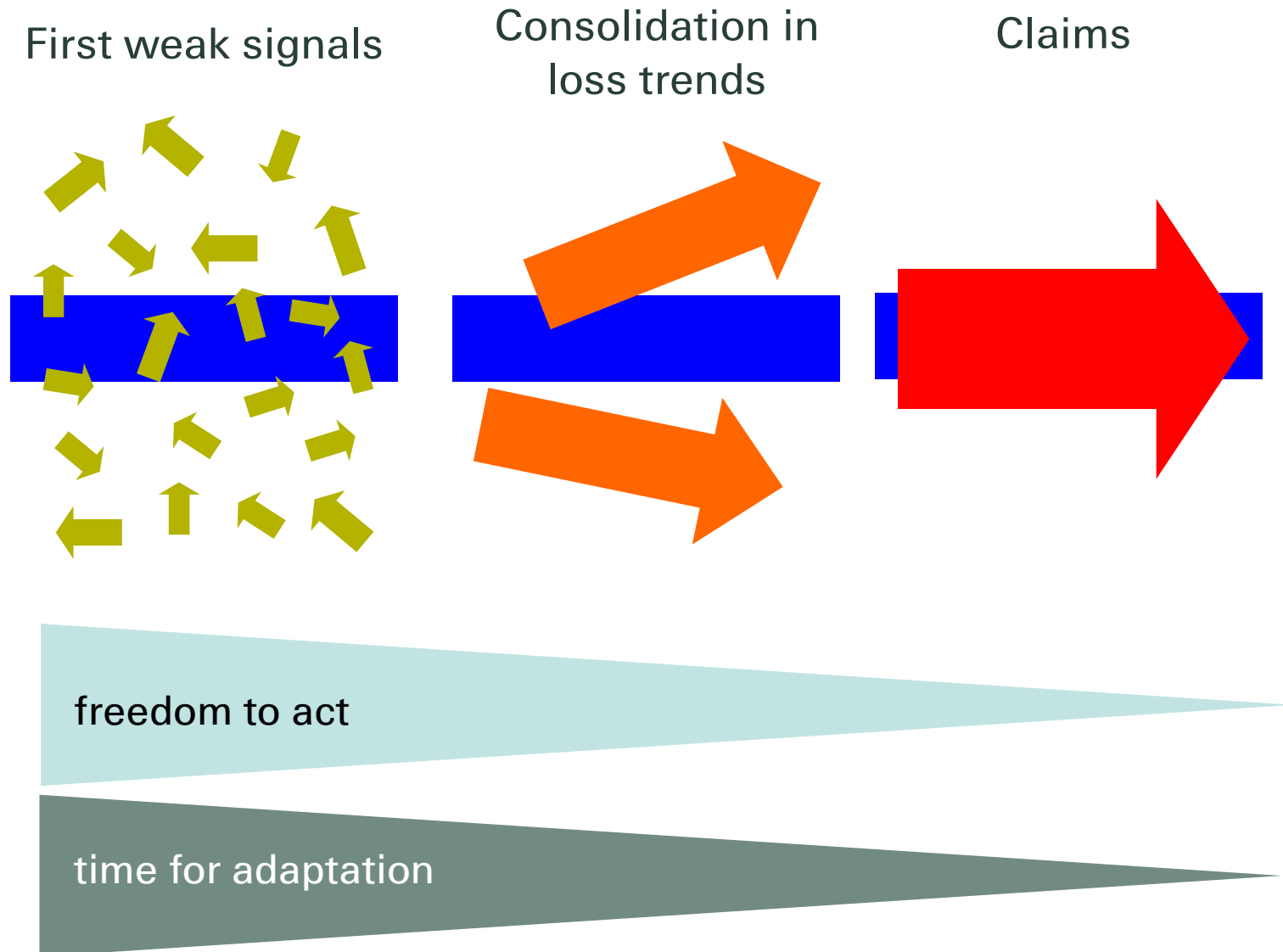
To avoid or mitigate similar losses, SONAR was created.

# The business case for emerging risks

Early action  
saves lots of  
money!

# Saving money by acting early

## From notion to claim – the lifecycle of emerging risks



# Saving money by acting early II

## Methodology: applying the past to look into the future



Yesterday's claims  
lessons learned

Tomorrows claims  
scenario

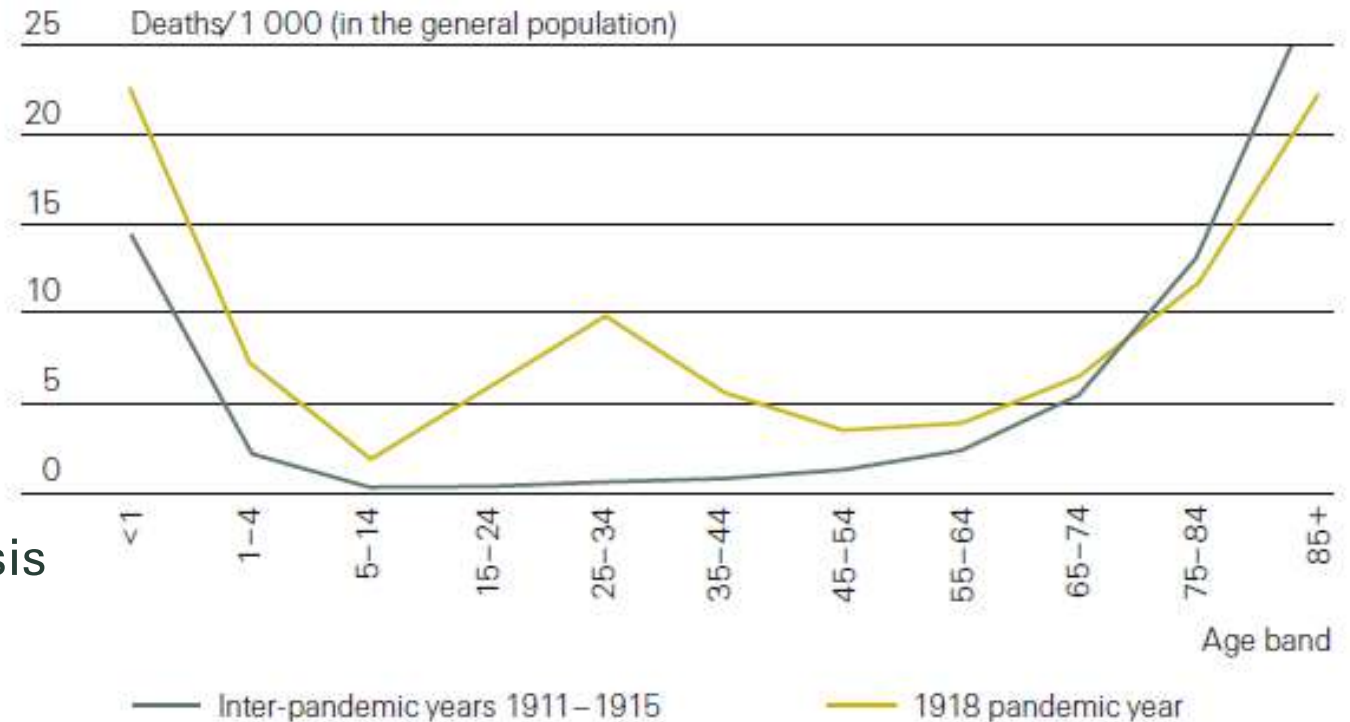
Today's  
notion

# Applying emerging risk in Life & Health insurance I

## What changes the mortality curve....

**Figure 3.1**  
Influenza and pneumonia average general population mortality per 1 000 by age (US data)

- Potential epidemics – e.g..
- AIDS
  - Influenza
  - Multi-resistant tuberculosis
  - .....



The graph shows average general population mortality for the inter-pandemic years 1911–1915 and during the 1918 pandemic year.

Source: based on, and derived from, data used in Taubenberger JK, 2006 (see footnote 54)

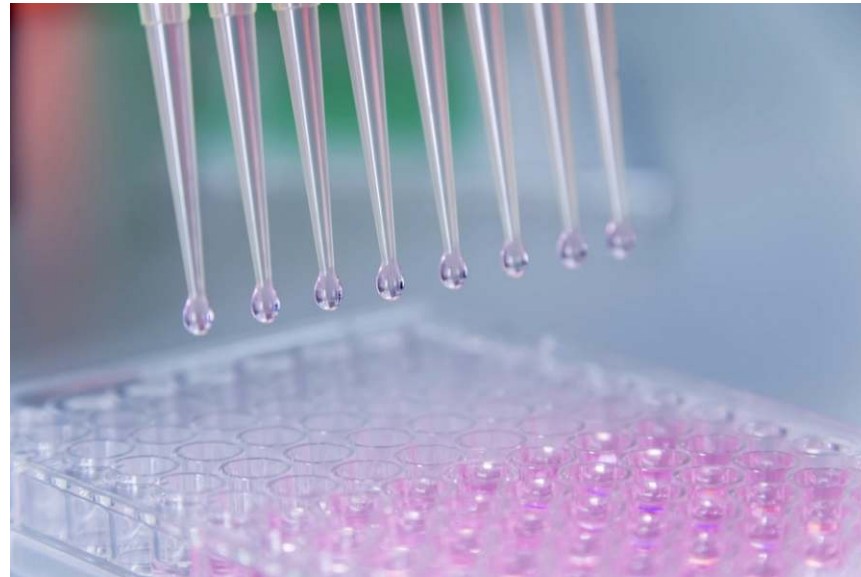
[media.swissre.com/documents/pandemic\\_influenza\\_a\\_21st\\_century\\_model\\_en.pdf](http://media.swissre.com/documents/pandemic_influenza_a_21st_century_model_en.pdf)



# ...or our claims load in critical illness coverages? Applying emerging risk in Life & Health insurance II

## Anything that contributes to

- heart attacks
- stroke
- cancer
- major organ transplant
- .....



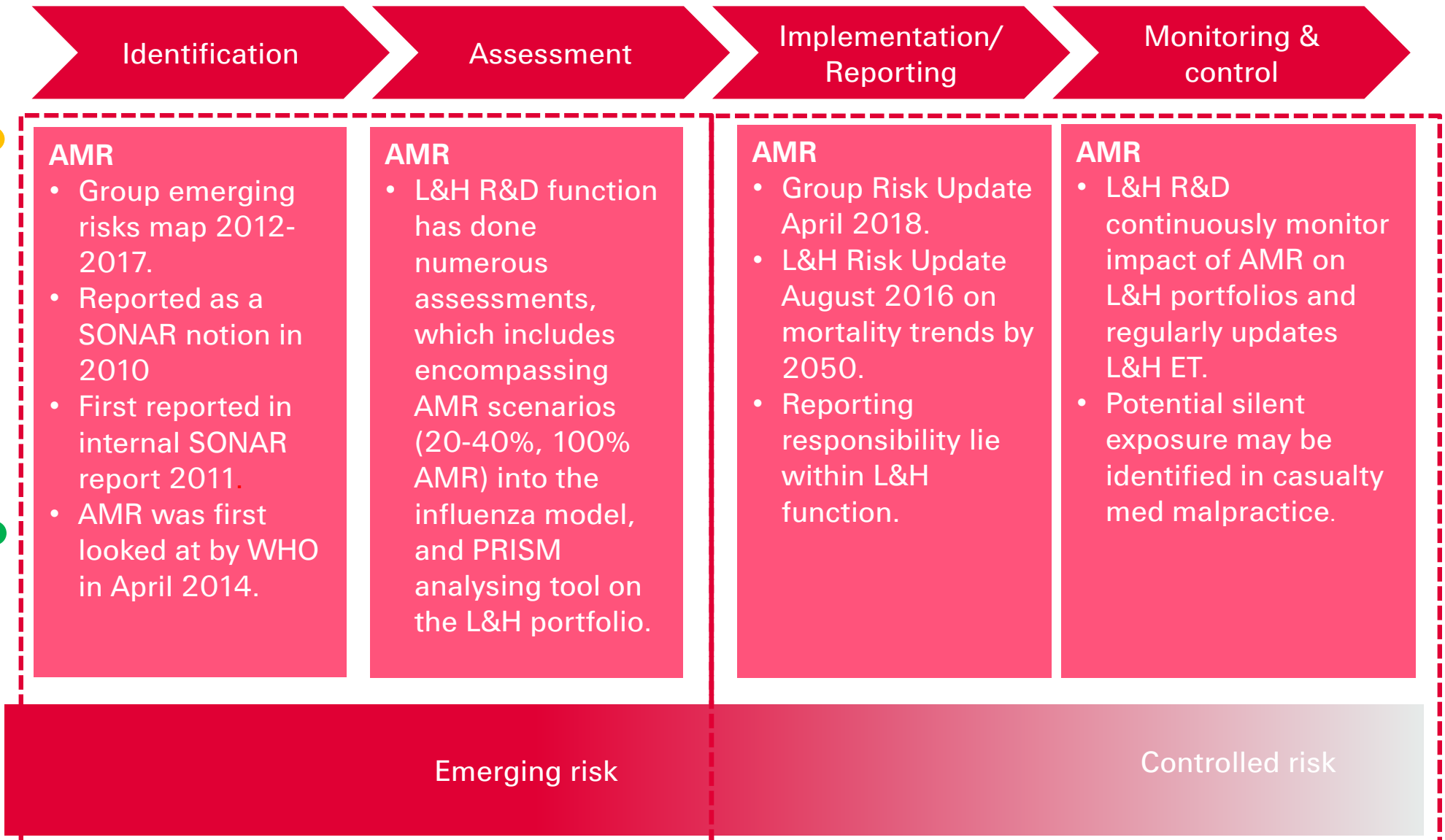
## ...or makes it easier to diagnose

- liquid biopsy
- genetic testing
- microbiome research
- health apps
- .....

**...is of interest.**



# Emerging risk examples: Untreatable infectious bacterial infections & diseases (AMR)



# Emerging risk examples: Asbestos reloaded USD 100 billion in losses and counting

Societal Environment

Impact: High

Time frame: >3 years



- Millions of metric tons of asbestos are still being processed in many countries today
- UN report showed that over 300 million people in Europe and Central Asia are potentially exposed
- Latin America and other regions also at risk
- Insurance consequences
  - There are safe replacement materials, so a total asbestos exclusion could be standard for the industry
  - Risk of underestimating impact of passive exposure to asbestos fibers in the air
- What to do?
  - Exclusion wherever possible

# What else in Life & Health

## Insurance relevant emerging risks 2015 - 2018





























2015	2016	2017	2018
<ul style="list-style-type: none"> <li>• Rising pandemic risk</li> <li>• The antibiotic boomerang</li> <li>• Genetic engineering</li> <li>• Lifestyle drugs</li> <li>• Death by design</li> <li>• Health tracking</li> <li>• The dangers of LED light</li> <li>• The office of the future</li> </ul>	<ul style="list-style-type: none"> <li>• Precision medicine</li> <li>• Health 4.0</li> <li>• Nutraceuticals</li> <li>• The meat story</li> </ul>	<ul style="list-style-type: none"> <li>• Bugs on the march</li> <li>• Man made epidemic</li> <li>• Antimicrobials in farming</li> <li>• Carcinogens in artificial turf</li> <li>• Liquid biopsy &amp; immunotherapy</li> <li>• Ageing in dignity</li> <li>• Risks of e-sports</li> <li>• Precision medicine – microbiome</li> <li>• Citizen science</li> </ul>	<ul style="list-style-type: none"> <li>• Asbestos reloaded</li> <li>• Genomics in precision medicine</li> <li>• Eyes wide shut – the world is sleeping less</li> <li>• Counterfeit medicine</li> <li>• Your printed heart – artificial organs</li> <li>• The risk of tattoos</li> <li>• The plastic in our veins</li> </ul>





# What else is in the 2018 SONAR Report?





# The 2018 edition of Swiss Re SONAR presents 18 new emerging risk themes


0 - 3 years			Potential Impact		
 	<b>A brave new world? – Emerging geopolitical risk</b>	 	<b>Towering infernos – combustible cladding</b>		<b>The dangers of shiny objects – tech hypes, fails and fraud</b>
	<b>A slow poison – the erosion of risk diversification</b>		<b>You pollute it, you own it – environmental liability and insurance</b>		<b>Funny money? – Do we need to worry about cryptocurrencies?</b>
				 	<b>Who's on watch – colliding ships</b>
				 	<b>Faking it – the business of counterfeit medicine</b>
> 3 years			Most affected business areas		
 	<b>Asbestos reloaded – USD 100 billion in losses and counting</b>	 	<b>Eyes wide shut – the world is sleeping less</b>	 	<b>The plastic in our veins - health risks from tiny particles</b>
	<b>Coming back to bite us – lurking cyber risks</b>	 	<b>Paradise lost – the price of ecosystem services</b>		<b>Your printed heart - longer lives for artificial organs?</b>
 	<b>Algorithms are only human too – opaque, biased, misled</b>	 	<b>Dumbed down – is digitisation undermining human skills?</b>		<b>Inked in – the risk of tattoos</b>
			<b>Fed up? - Uncertain future of monetary policy regimes</b>		

 for **Property:**

 for **Casualty:**

 for **Life & Health:**

 for **Financial Markets:**

 for **Operations:**





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