Solvency II 시행 전후 유럽보험시장 변화

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『Solvency II가 유럽보험시장에 미친 영향과 시사점』
김해식 실장

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1. 유럽보험시장의 등장 (1994)

- Solvency II 적용 중인 유럽경제지역(EEA = EU 28개국 + EFTA 3개국) 31개국 보험시장

  * 유럽자유무역연합(EFTA): 아이슬란드, 노르웨이, 리히텐슈타인; 스위스(EEA 제외)로 구성

자료: EU(https://europa.eu/european-union/about-eu/countries_en#map)

1.1. 유럽보험시장 규모

- **유럽보험시장은 세계 3대 시장**

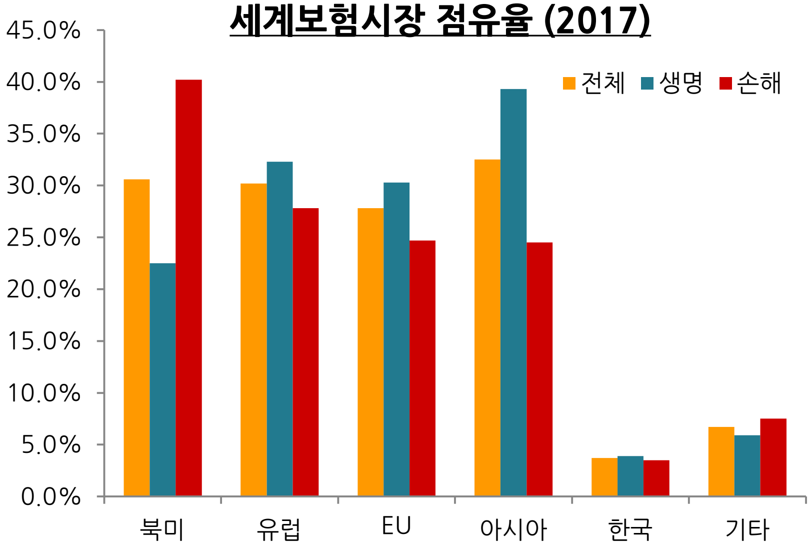
  - 북미, 아시아 보험시장이 유럽보험시장과 함께 세계시장을 1/3씩 분할

- **유럽보험시장 내 주요 4대 시장은 영국, 프랑스, 독일, 이탈리아**

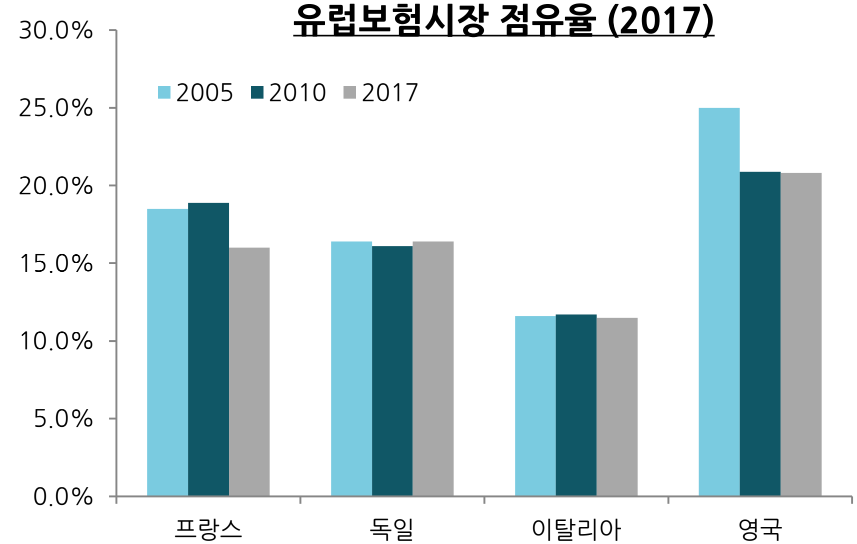
  - 2017년 보험료 기준 4개국의 시장점유율(CR4)은 64.7%

  *** 한국 보험시장의 규모는 2017년 유럽보험시장의 13% 수준**

세계보험시장 점유율 (2017)



유럽보험시장 점유율 (2017)



주: 1. 세계보험시장 점유율(2017)의 유럽 점유율은 동유럽 등 유럽지역 보험시장을 모두 포함한 수치임
2. 유럽보험시장 점유율(2017)은 EU 기준임
자료: Swiss Re (2018)

kiri 보험연구원

2. 저금리 (prolonged low interest rates)

- **유럽은 1980년대 이후 지속적인 금리 하락을 경험**

영국 (10년 만기 국채)

프랑스 (10년 만기 국채)

이탈리아 (10년 만기 국채)

독일 (10년 만기 국채)

자료: tradingseconomics.com

2.1. 저금리 이전과 이후

- 1980년대 이후 시장환경을 특징 짓는 키워드 (Levy · Temin, 2007)

- 규제완화(De-regulation): **시장경쟁 촉진**; 진입규제, 상품 및 가격규제

- 규제강화(Re-regulation): **건전성 보호**; risk-based solvency test, 시가회계, 지급보장기금

미국 (10년 만기 국채)

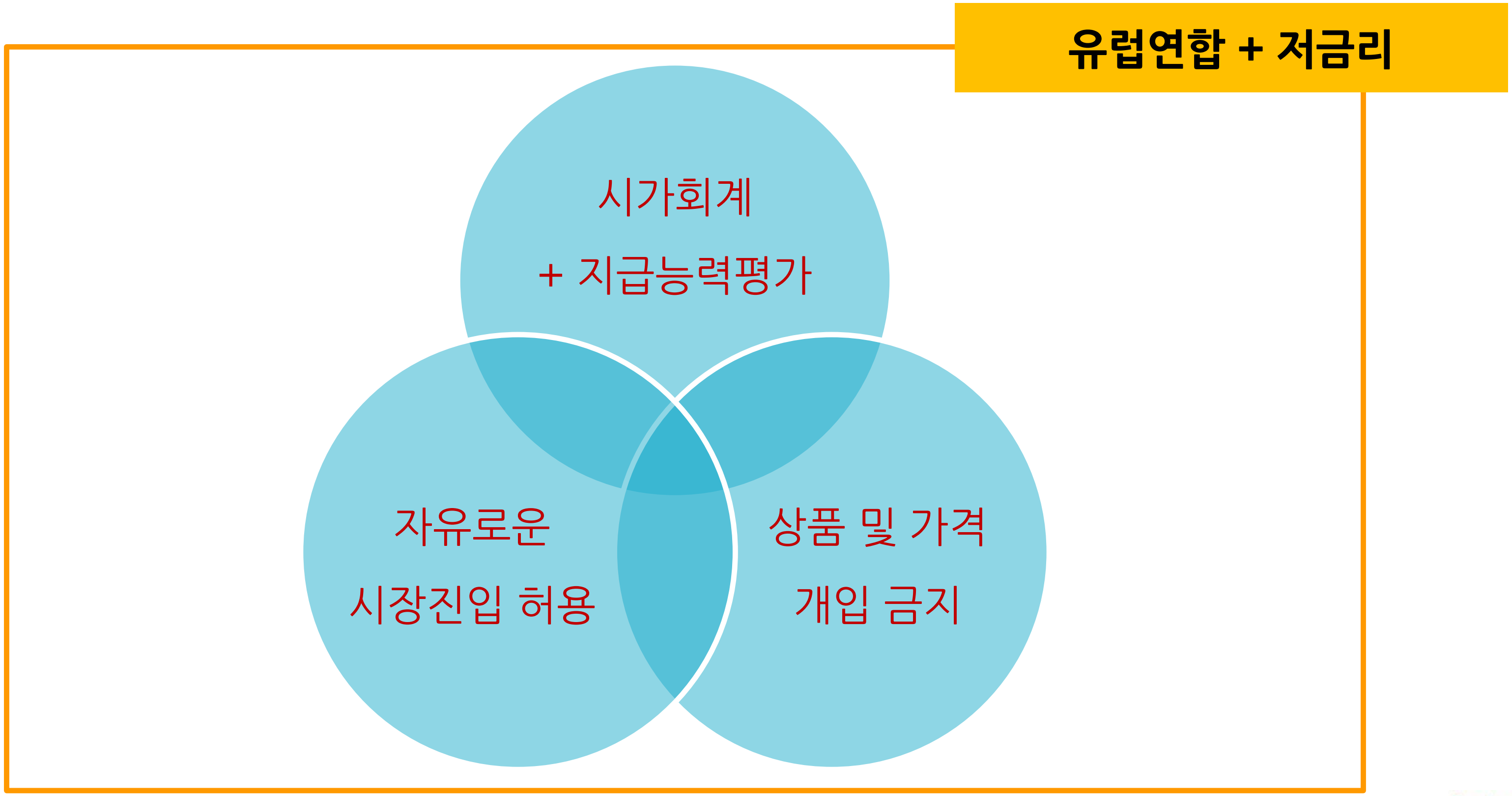
자료: tradingseconomics.com

3. 유럽보험시장의 규제혁신(regulatory reform)

- **제3차 보험지침(1994)과 금융시장통합플랜(1999~2005)**

- 경쟁 촉진 위한 감독 개입 최소화: 단일면허, 상품 및 가격 규제 철폐

- 저금리 대응 공통 기준 마련: 시가회계(IFRS)프로젝트와 자본건전성기준(Solvency II)프로젝트



4. Solvency II Project

- **시가평가에 기초한 지급능력평가 (market-consistent and risk-based solvency test)**
- **Solvency II Project (2001~2009): 2차례 시행 연기(2012-2014-2016) 후 2016년 적용**
- **Insurance Contracts Project (1997~2017): 1차례 시행 연기(2021-2022)**

건전성규제 (Solvency) 프로젝트	보험회계 (IFRS 4 / IFRS 17) 프로젝트
• 1997 Solvency I Project (phase 1) 시작	• 1997 Insurance Contracts Project 시작
	• 1999 Issues paper on Insurance Contracts
• 2001 Solvency II Project (phase 2) 시작	• 2001 Draft Statement of Principles 공표
• 2002 Solvency I Project (phase 1) 완료 KPMG 보고서, Sharma 보고서	• 2002 phase 1과 phase 2로 프로젝트 분리
• 2003 보험감독위원회(CEIOPS) 신설	• 2003 Exposure Draft (phase 1)
• 2004 Solvency I (phase 1) 시행	• 2004 IFRS 4 (phase 1) 시행
• 2005 (~2008) phase 2 계량영향평가(QIS1~4)	
• 2007 Solvency II 지침 초안 마련	• 2007 Discussion Paper(phase 2): 공정가치
• 2009 Solvency II 지침(2009/138/EC) 제정	
• 2010 제5차 계량영향평가(QIS5)	• 2010 Exposure Draft(phase 2): 이행가치
• 2011 장기보증영향평가(LTGA) CEIOPS→EIOPA(거시건전성 감독 추가)	• 2013 Revised Exposure Draft(phase 2)
• 2014 Solvency II 지침 개정(Omnibus II)	

자료: EIOPA; IASB

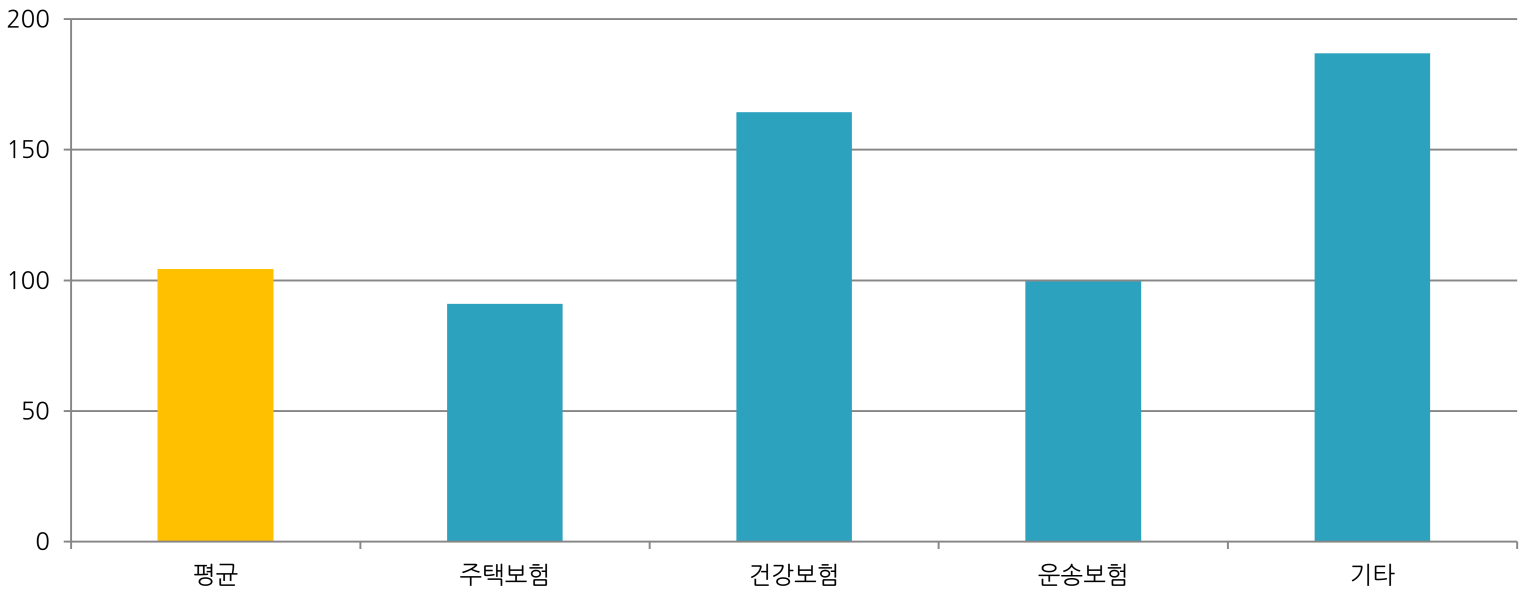
II. Solvency II 시행 전후 유럽보험시장

1. 유럽보험시장의 경쟁 촉진
2. 유럽보험시장의 저금리 대응
3. Solvency II 지급여력평가
4. 시장 안정과 Solvency II

1. 유럽보험시장의 경쟁 촉진

- **"잘못된 정보와 불완전판매는 여전히 감독 현안, 그러나 과도한 보험료(overpricing)는 더 이상 감독 현안이 아니다." (Pradier·Chneiweiss, 2016)**
- **손해보험시장의 경쟁 심화 (Eling et al., 2009)**

소비자물가지수 대비 보험료 (1996-2014)



자료: Pradier·Chneiweiss (2016)

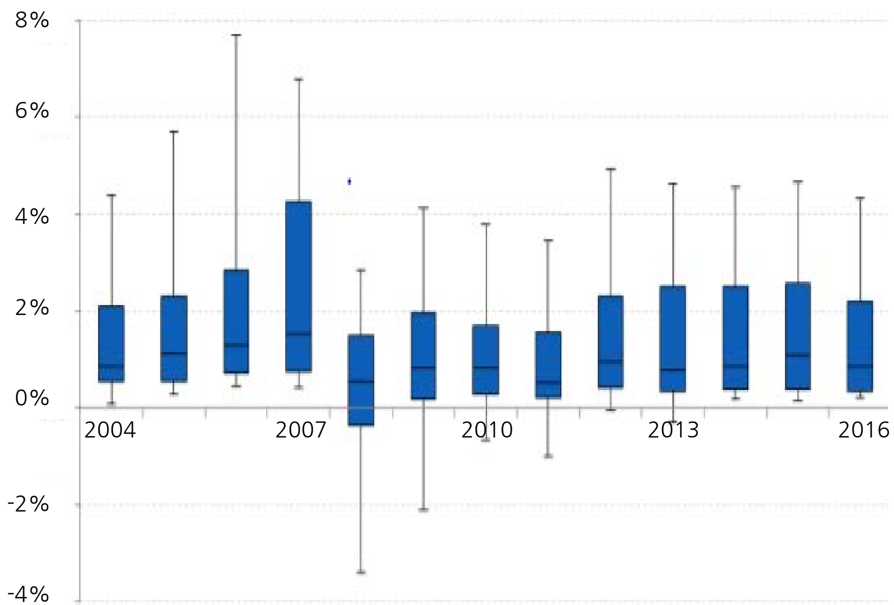
1.1. 유럽보험시장 수익성 추이

- 67개 보험회사(유럽보험시장 전체 자산의 70% 차지) ROA 분석

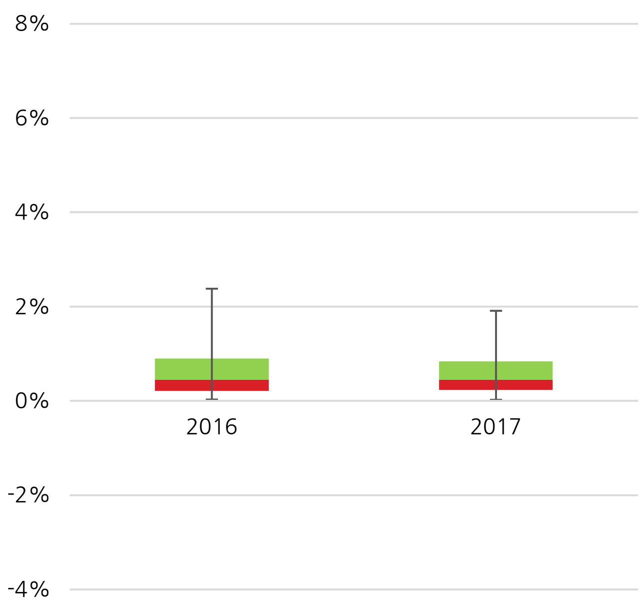
  - 평균 ROA는 전 기간에 걸쳐서 1% 수준을 유지하는 가운데 전반적으로 하향 안정화

- 유럽보험시장 전체: 평균 ROA 0.5% 수준

67개 보험회사 ROA 분포(2004~2016)



유럽보험시장 전체 ROA 분포(2016~2017)

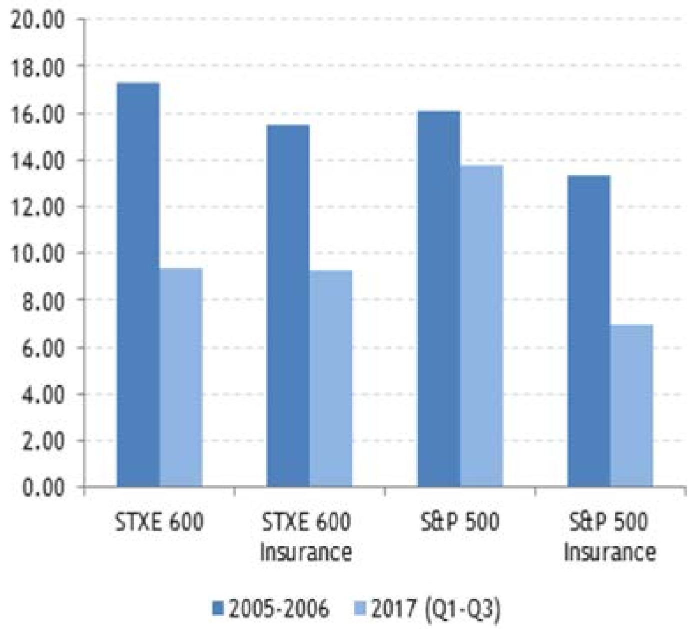


주: 1. Box Plot의 상한과 하한은 90번째, 10번째 백분위수, 상자 상단과 하단은 75번째, 25번째 백분위수, 상자 내 실선은 중위값임
자료: EIOPA Financial Stability Report (2017.6; 2017.12)

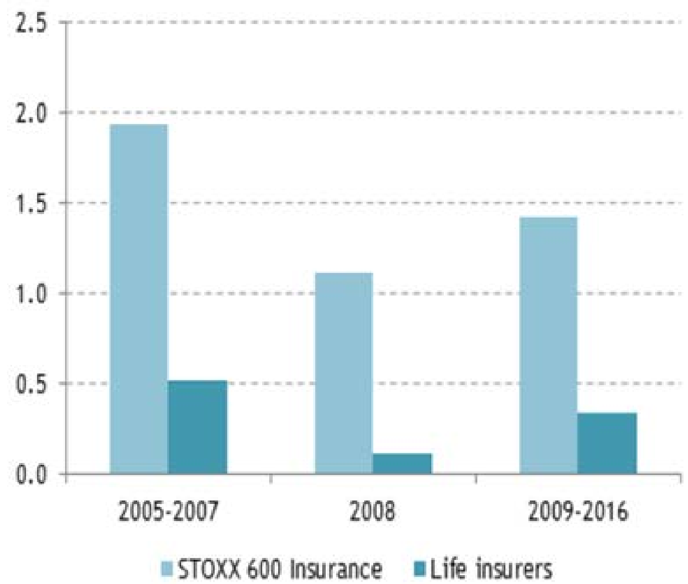
1.2. 유럽 장기보험의 수익성

- **장기보험을 취급하는 생명보험은 확연한 ROA 하락 추이를 보임**
- **생명보험의 ROA 하락 추이는 시장경쟁보다는 지속적인 저금리 영향이 크게 작용**

산업 간 ROE 기간별 비교



보험산업 간 ROA 기간별 비교



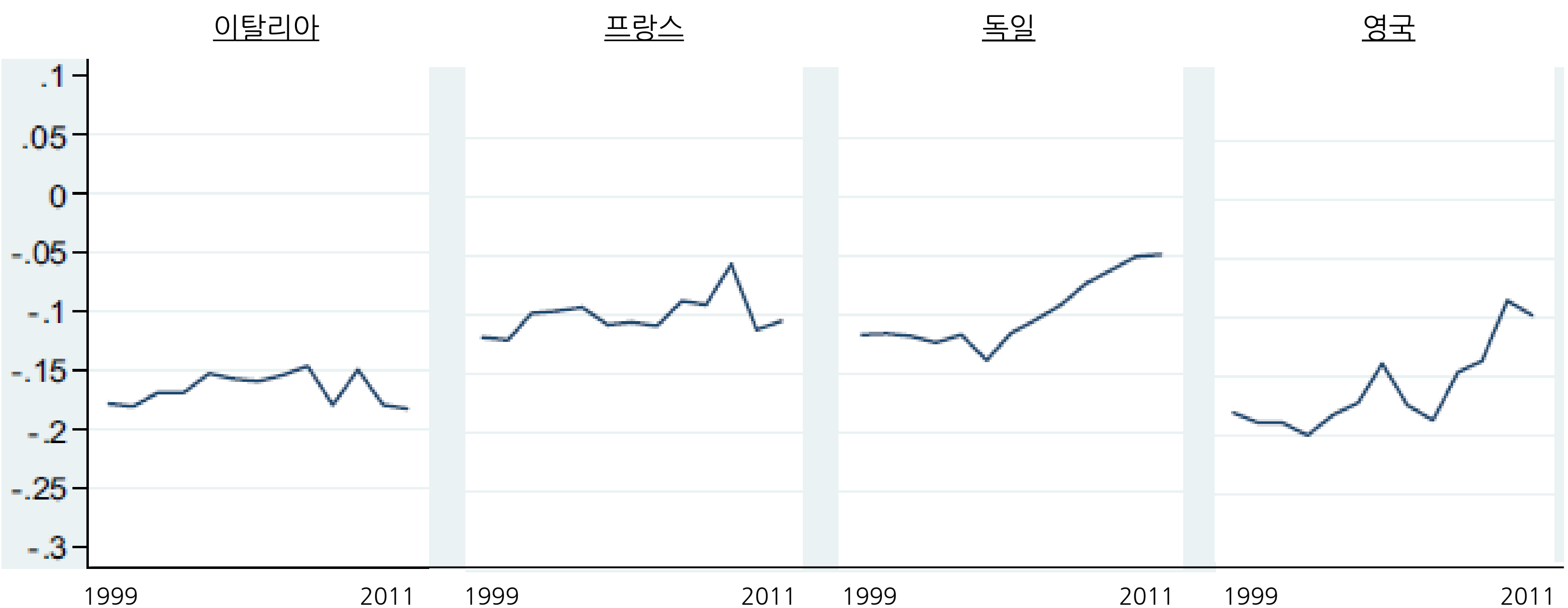
자료: EIOPA Financial Stability Report (2017.12). 원전은 Bloomberg Annual/Quarterly Data

1.3. 유럽 생명보험시장의 시장집중도 상승

- **유럽 생명보험시장에서도 효율성이 높은 보험회사의 시장점유율이 높게 나타남**
- **그러나 생명보험시장의 시장경쟁은 약화되는 추이를 보임**

-10개 유럽 생명보험시장을 Boone 지수로 분석 (Cummins et al., 2017)

유럽 생명보험시장 Boone 지수의 연도별 추이(1999~2011)



주: Boone지수는 한계비용이 낮은 기업일수록 높은 시장점유율을 차지한다는 가정에서 측정하며, Boone 지수 값이 마이너스(-)이면 효율적인 기업의 시장점유율이 높다는 의미이고 절대값이 클수록 경쟁 압력이 커짐을 의미함

자료: Cummins et al. (2017)

2. 유럽보험시장의 저금리 대응

- **오래 전부터 준비된 저금리 대응: 크게 4가지 형태가 보편적 (CEIOPS, 2007)**

- 감독당국: (1) 신계약 최대보증이율 상한 하향 조정, (2) 위기상황분석

- 보험회사: (3) 장기국채 투자, (4) 투자형 또는 순수보장형 상품 판매 확대

유럽 각국 금융당국의 대응	보험회사의 대응	
• 금리 관련 모니터링 및 보고 요건 강화 • **위기상황(stress testing) 및 민감도 분석** • 금리위험특별준비금 적립 요구 • 책임준비금 할인율 조정 등 평가방식 수정 • **신계약에 적용할 보증이율 상한 하향 조정** • 투자정책 변화 요구 • 계약자배당 축소 • 요구자본 수준 조정 • 특정 상품판매 금지 • 보유계약 미래보험료에 대한 보증이율 축소	**[신계약]** • **신계약 보증이율 조정** • **Unit-linked, 순수보장 확대** • 특정 이율보증상품 판매 중지 • 이율보증 수정 조항 약관 반영 • 신계약 보장기간 축소 • 신용보험 등 대체시장 모색	**[보유계약]** • 이익배당 축소 • 준비금 추가적립 • 계약전환 캠페인 • 보유계약 조건변경 **[ALM 전략 등]** • 비용절감 • **매칭, 헤지 등 ALM전략 수정** • 고수익 투자 확대

자료: EIOPA (2016)

2.1. 신계약 적용 보증이율 상한 하향 조정

- **Solvency Ⅱ 이후에도 보증이율 상한 조정제도가 유지되는 사례가 많음**

  - 보증이율 상한은 일반적으로 국채수익률에 연동: 유럽보험시장 2015년 평균 1.66%

- **그러나 신계약에만 적용되므로 저금리 대응에는 제한적임**

유럽보험시장 최대보증이율제도 적용 현황

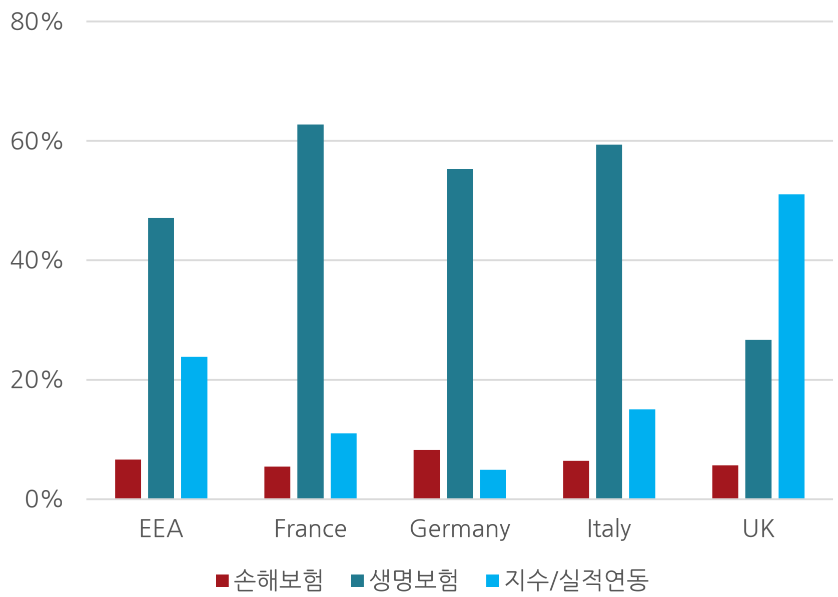
회원국	보증이율 상한	Solvency Ⅱ 이후 지속 여부
오스트리아	1.50%	지속
벨기에	3.75%	지속
체코	1.30%	폐지
덴마크	1.00%	지속
프랑스	0.00%	지속
독일	1.25%	지속여부 검토
그리스	3.35%	폐지
이탈리아	1.00%	폐지
룩셈부르크	0.75%	지속
리히텐슈타인	1.50%	지속
노르웨이	2.00%	폐지
루마니아	2.50%	폐지

자료: EIOPA Financial Stability Report (2015.12)

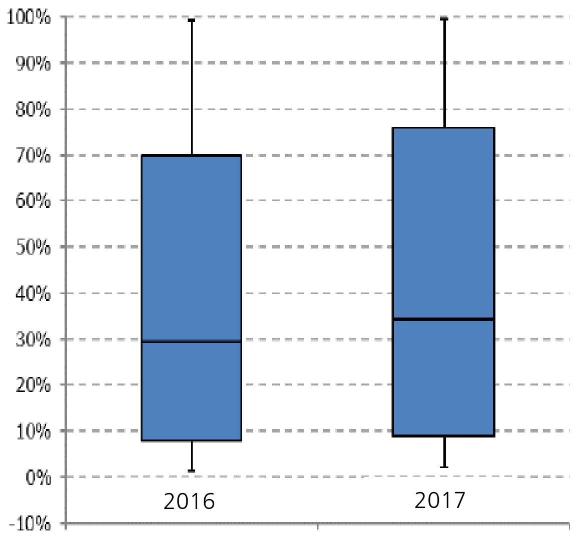
2.2. 투자형상품 비중 확대

- Solvency Ⅱ 이전에도 이미 생명보험시장 전체 보험료의 40% 수준(2004); 2016년 22% 수준
  - 2016년 책임준비금의 26% 수준, 중위 생명보험회사의 보험료 비중은 30% 내외
- Solvency Ⅱ 이후 더욱 심화될 것으로 예상: 자본 부담이 많은 보험상품 비중 축소

총자산 대비 책임준비금 구성비 (2016)



Unit-linked 회사별 보험료 비중 (2016)



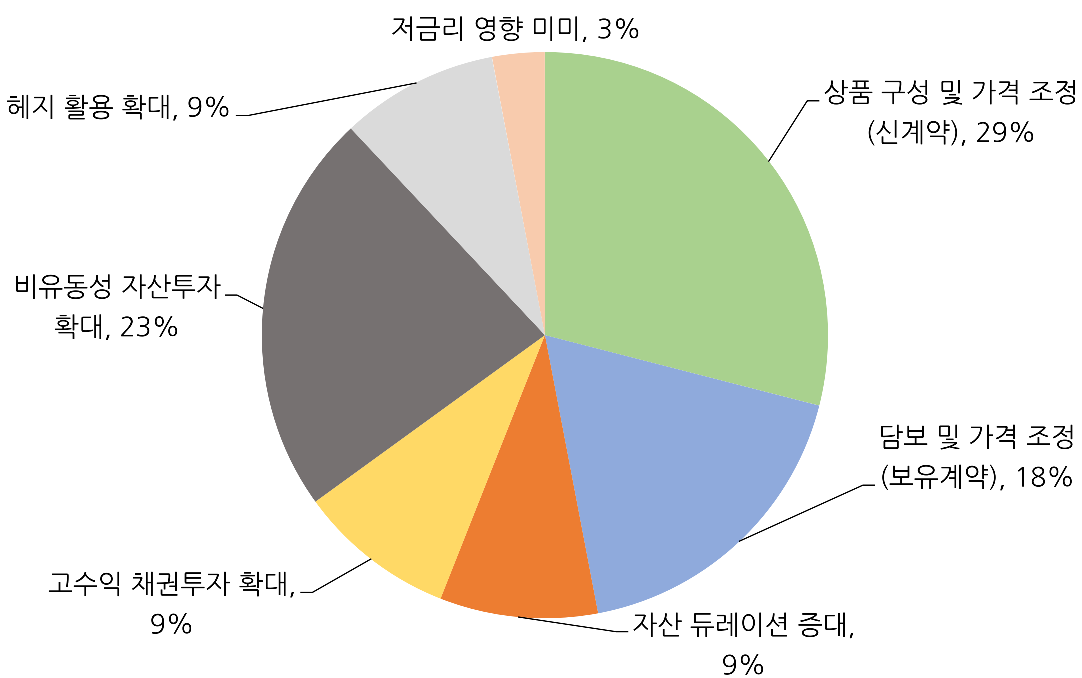
주: 1. Box Plot의 상한과 하한은 90번째, 10번째 백분위수, 상자 상단과 하단은 75번째, 25번째 백분위수, 상자 내 구분선은 중위값임
자료: EIOPA Statistics, EIOPA Financial Stability Report (2017.12; 2018.6)

2.3. 저금리 대응의 변화

- **저금리는 구조적인 문제: 즉각적인 효과를 기대할 수 있는 대응책 마련이 어려움**
- **최근에는 고수익 투자(search-for-yield)가 증가: 31% (비유동성 + 고수익 채권)**

  - 상품구성 변화(29%)가 꾸준하게 추진

유럽보험회사의 저금리 대응 수단 (2017)



자료: Moody's Investors Service (2017)

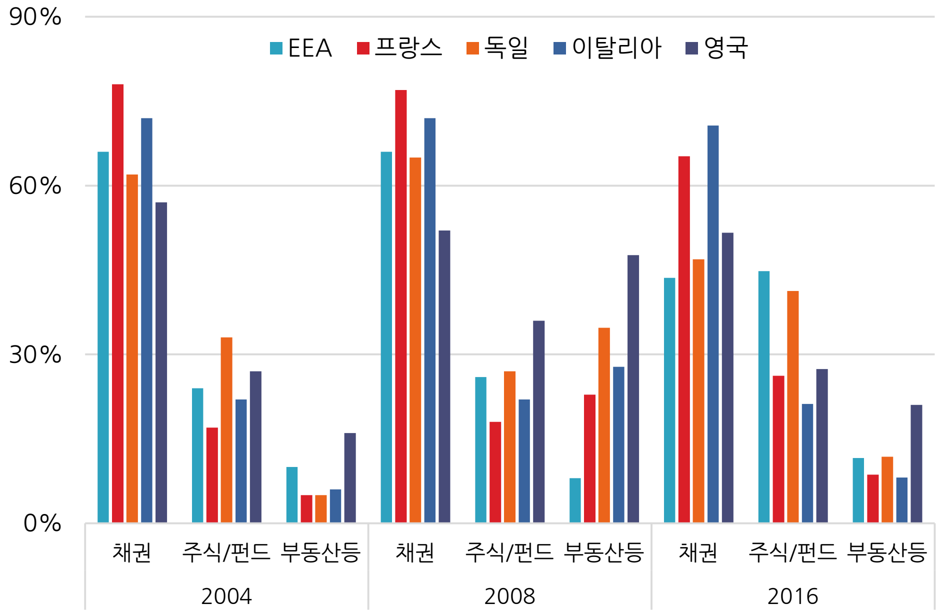
2.4. 유럽보험시장 자산 구성

- **이자수익자산 중심의 자산 구성 유지**

  - 수익 추구형으로 자산 구성 변화

- **투자(실적연동)형 상품의 대응 자산은 주식, 투자펀드/집합투자 비중이 높음**

유럽보험시장의 운용자산 구성 (2004~2016)



2016	EEA	전통형	Unit-linked
국채	22.5%	28.4%	5.9%
회사채	21.1%	27.0%	4.6%
주식	13.6%	12.1%	17.7%
투자펀드	31.2%	19.3%	64.8%
현예금	3.7%	4.2%	2.4%
모기지 등	5.4%	6.9%	1.5%
기타	2.4%	2.1%	3.2%

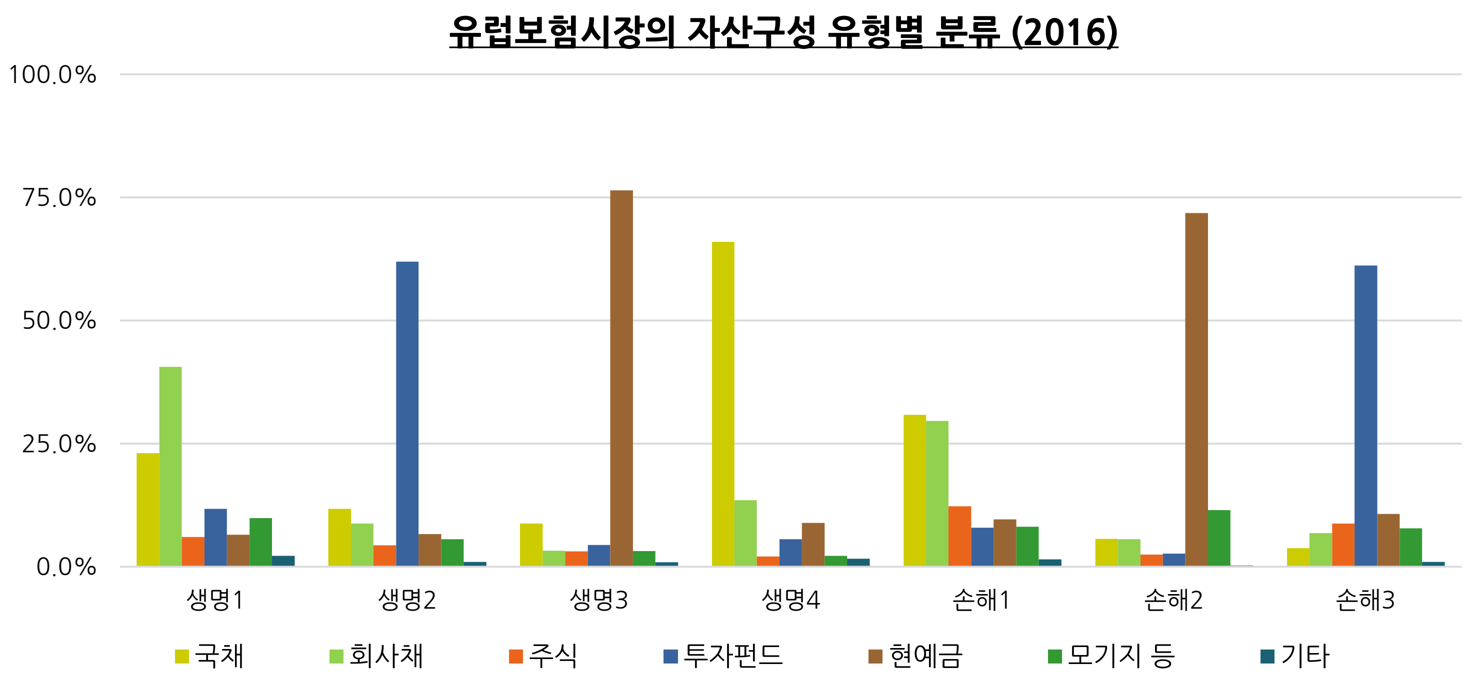
자료: CEIOPS Financial Stability Report (2004.12; 2009.12), EIOPA Financial Stability Report (2017.12), EIOPA Statistics

2.5. 자산운용 유형

- **주요 보험시장의 상품구성에 대응하는 자산구성 특성**

- 생명보험: (그룹1) 독일, (그룹2) 영국, (그룹3) 네덜란드, 스웨덴, (그룹4) 이탈리아

- 손해보험: (그룹1) 독일, 네덜란드, (그룹2) 아일랜드, (그룹3) 독일, 핀란드



자료: EIOPA Financial Stability Report (2017.12)

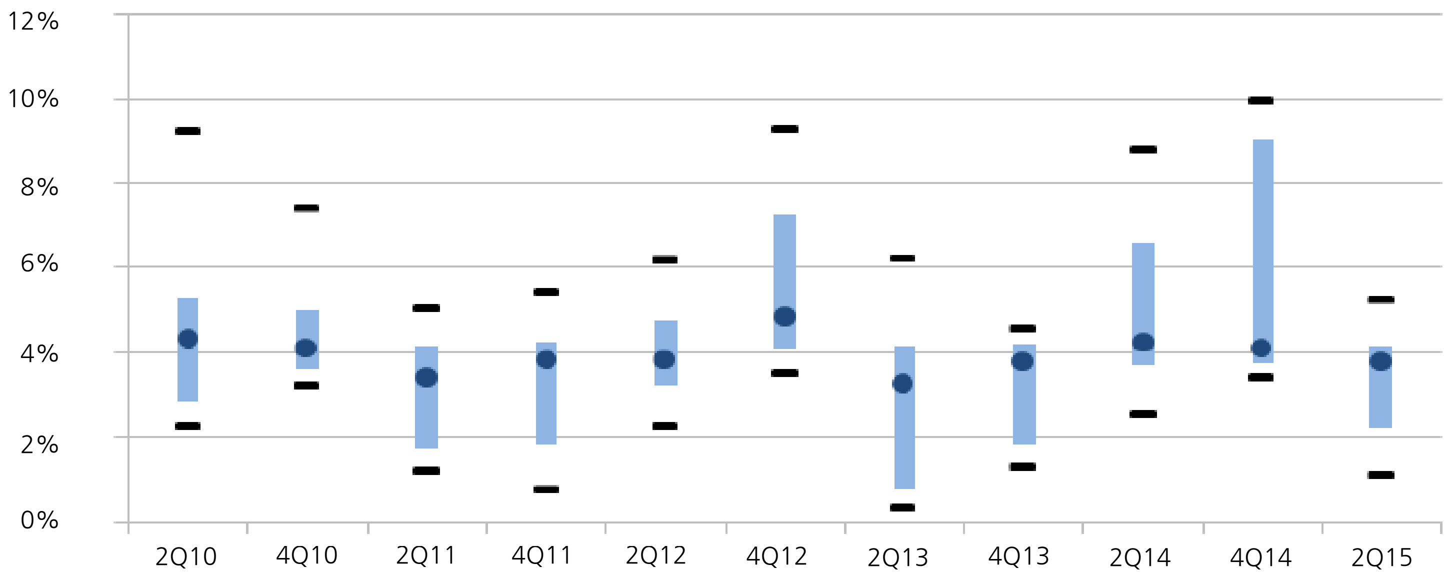
2.6. 투자수익률

- **이자수익 중심의 자산 구성**

  - 재투자 위험

  - 채권가치 상승; 그러나 부채 시가 상승을 상쇄하기 어려운 구조

유럽보험시장 투자수익률 연도별 분포 (2010~2015)



주: 1. Box Plot의 상한과 하한은 90번째, 10번째 백분위수, 상자 상단과 하단은 75번째, 25번째 백분위수, 상자 내 점이 중위값임
자료: EIOPA Financial Stability Report (2015.12)

2.7. 금리위험

- **자산 듀레이션: 나라마다 큰 차이 없음**

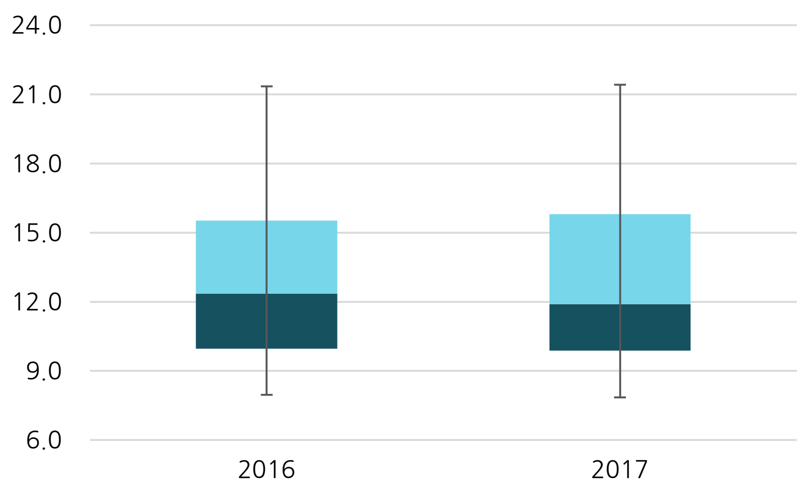
  - 생명보험: 최대 10~12년

- **부채 듀레이션은 상품 구성에 따라 큰 차이**

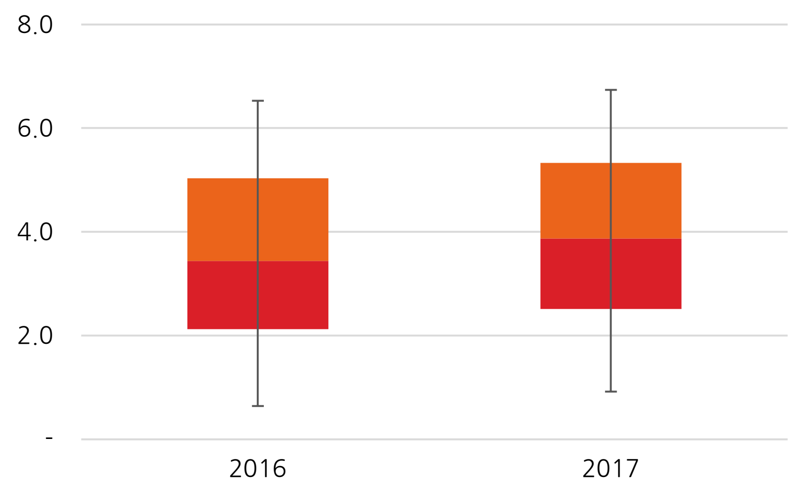
  - 유럽보험시장의 생명보험 평균 12년, 손해보험 3년 내외

  *** (독일) 자산 10년, 부채 21년; (영국) 자산 12년, 부채 11년 (BOJ, 2016)**

생명 부채듀레이션



손해 부채듀레이션



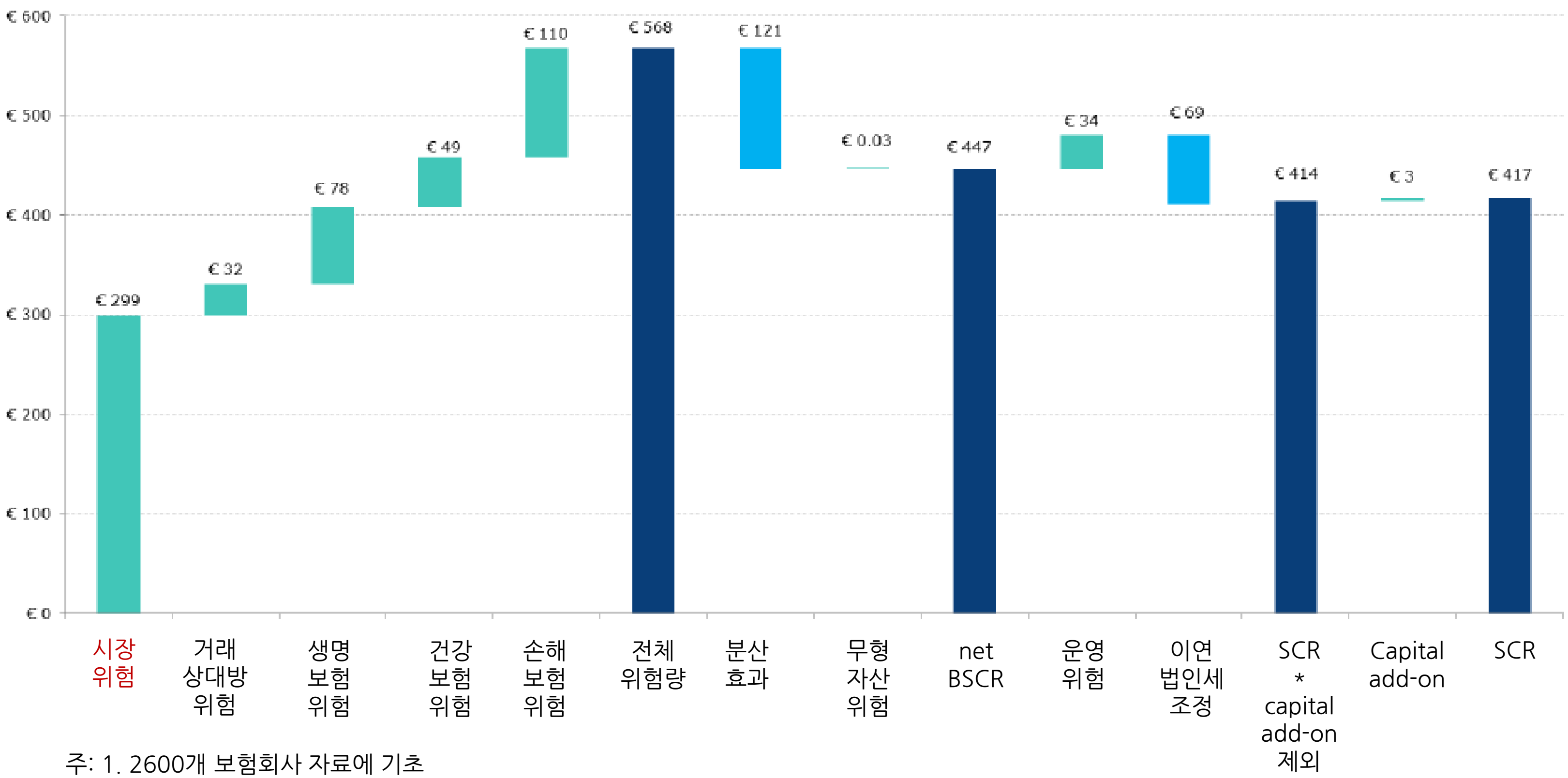
주: 1. Box Plot의 상한과 하한은 90번째, 10번째 백분위수, 상자 상단과 하단은 75번째, 25번째 백분위수, 상자 내 구분선은 중위값임
자료: EIOPA Statistics

3. Solvency Ⅱ 지급여력평가

- **유럽보험회사 총위험량(요구자본)의 대부분을 시장위험이 차지**

- 금리위험, 주식위험 노출이 가장 큰 것을 반영함

유럽보험회사 요구자본(SCR: Solvency Capital Requirements) 구성 (2016)



주: 1. 2600개 보험회사 자료에 기초
2. 금액 단위는 백만 유로(EUR)

자료: EIOPA Financial Stability Report (2017.12)

kiri 보험연구원

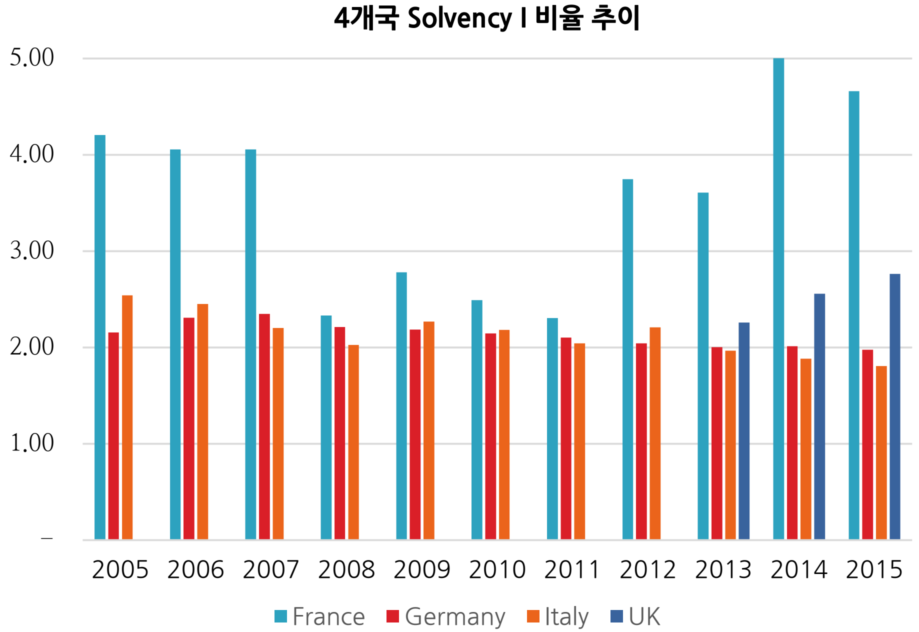
3.1. 지급여력비율

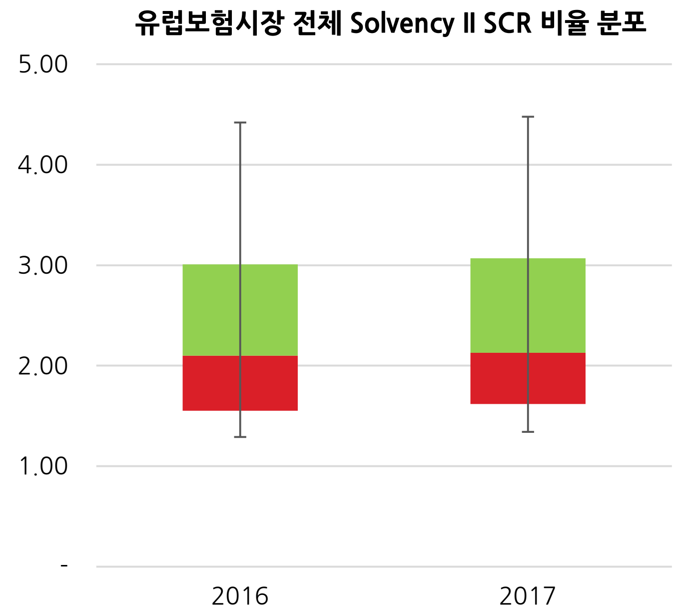
- **Solvency Ⅱ 시행 이후 전반적으로 분포 하향**

  - 평균 지급여력비율(solvency ratio or SCR ratio)은 200% 이상을 유지

- **Solvency Ⅱ 시행 후 지급여력비율은 경과/보완조치가 적용됨**

유럽보험시장 지급여력비율 추이(2005~2017)





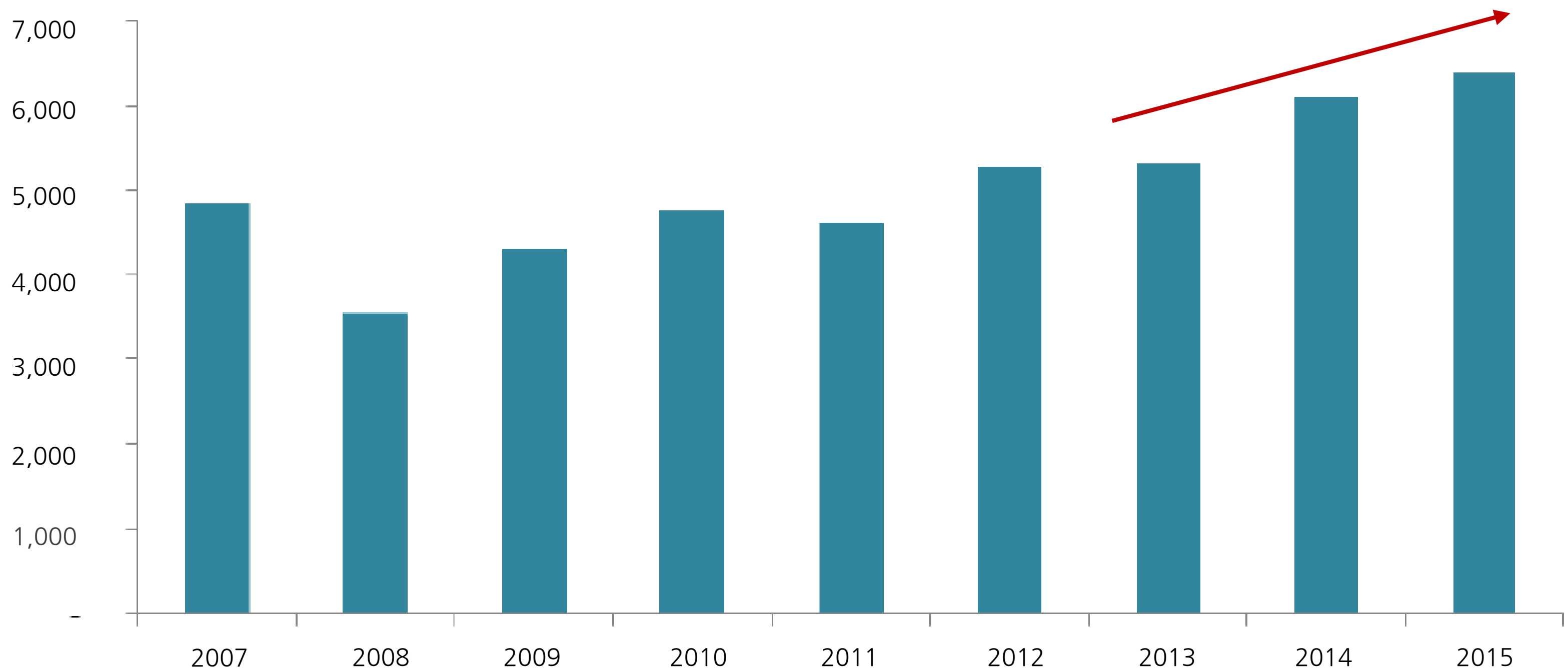
주: 1. Box Plot의 상한과 하한은 90번째, 10번째 백분위수, 상자 상단과 하단은 75번째, 25번째 백분위수, 상자 내 구분선은 중위값임
자료: EIOPA Statistics

3.2. 자본의 변화

- **Solvency Ⅱ 시행 직전 2년 간 자본량 증가**

  - 글로벌 금융위기 이후 자본 회복을 거쳐 2014년부터 자본 증가

유럽보험시장 가용자본 추이 (2007~2015)



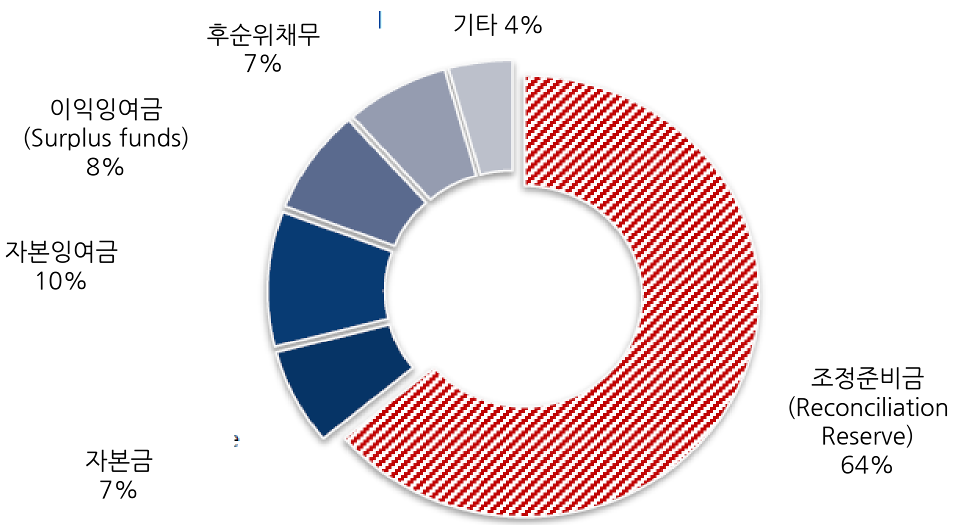
주: 1. 23개국 148개 보험회사 자료에
 2. 금액 단위는 십억 유로(EUR)
자료: EIOPA Financial Stability Report (2016.12)

3.3. 가용자본 구성

- **가용자본 가운데 Tier 1 구성비: 93%**

  - 자본 및 자본잉여금은 가용자본의 17%, 이익잉여금은 가용자본의 8%
- **가용자본의 대부분(64%)은 조정준비금: 평가이익, 보험계약 장래이익 등으로 구성**
- **후순위채무는 가용자본의 7%**

유럽보험시장 가용자본 구성 (2017)



자료: EIOPA Financial Stability Report (2017.12)

4. 시장 안정과 Solvency II

- 글로벌 금융위기 이후 유럽은 시스템위험 관리 측면에서 저금리 대응을 모색

- 건전성규제와 정리제도를 재편하여 개별 보험회사의 복원력을 높이는 한편,

- Solvency II를 통한 보험회사의 고수익 추구 등 쏠림 행위를 제한하고,

- 경기 악화 시 안전자산, 단기투자 등의 경기순응성을 최소화하기 위한 보완조치 제시

거시건전성과 Solvency II

복원력 강화	쏠림 현상 억제	경기순응성 회피
• 요구자본 강화, 배당 억제 • 시스템위험 추가자본 • 보증이율 축소 • 보험회사 정리제도 개선	• Solvency II	• 부채 할인율 가산금리 • 책임준비금 적립기간 연장 • 주식위험 대칭 조정

자료: EIOPA (2016)

4.1. Solvency II 시행과 연착륙 조치

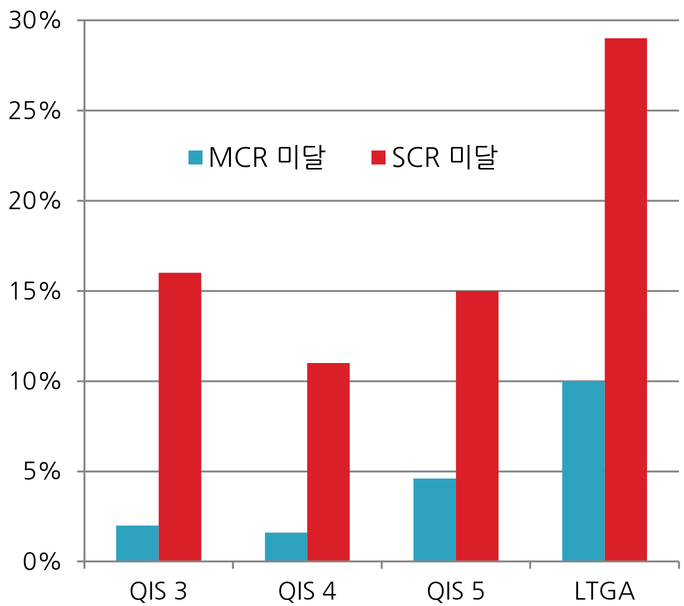
- **글로벌 금융위기 이후 영향평가(QIS5, LTGA) 결과, 보험회사의 수용능력에 문제**

  - 상당수 보험회사의 지급여력기준 미달: 영업정지 등의 감독조치 대상 급증

- **저금리로 누적된 구조적 요인의 영향 저감 대책**

  - 책임준비금 평가 할인율 가산금리 적용 (VA, MA); 책임준비금 추가적립 기간 연장 (TTP)

Solvency II 현장영향평가



자료: Pradier·Chneiweiss (2016), 조재린(2016)

Solvency II 보완/경과조치

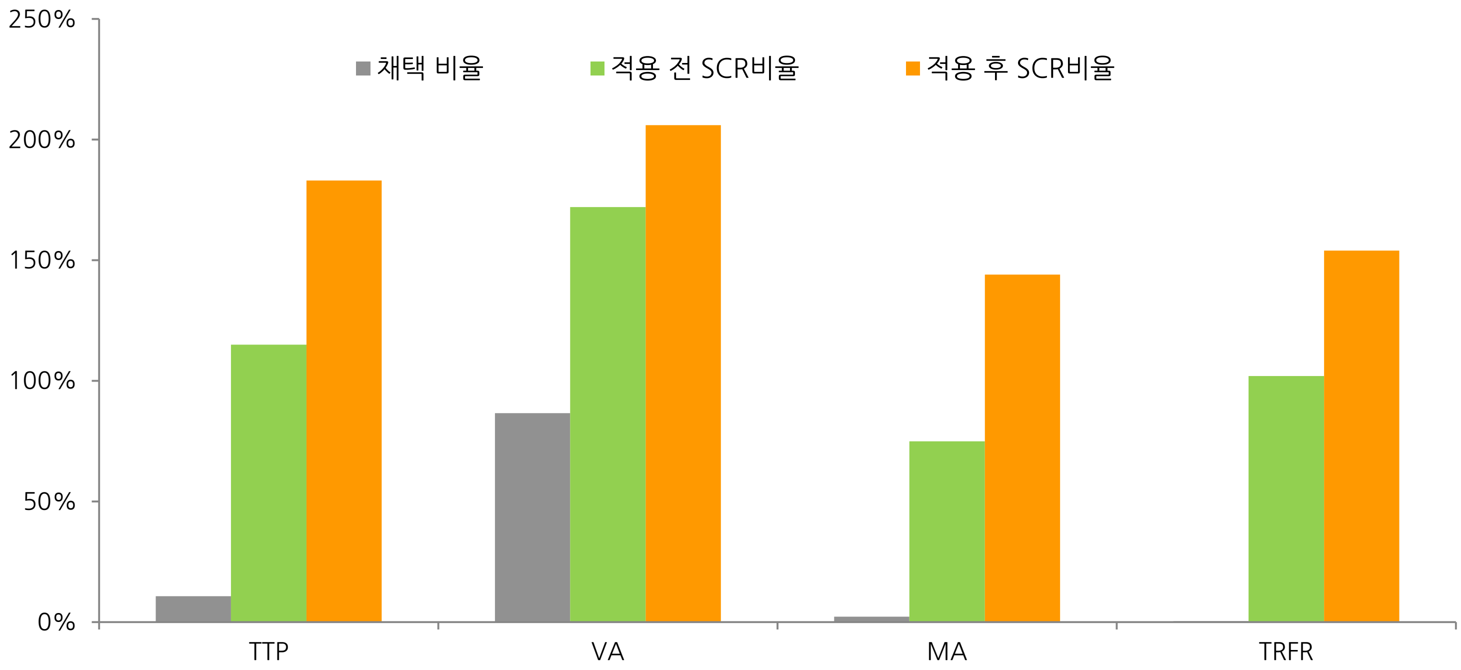
가용자본	요구자본
• Solvency II 도입 전·후 책임준비금 또는 무위험이자율 차이 16년 내 점진적으로 반영 • Solvency II 도입 이전 인정 자본은 이후 10년 간 그대로 인정	• Solvency II 도입 전에 취득한 주식 관련 위험은 7년 이내 점진적으로 반영 • 집중 및 스프레드 위험은 4년 이내 점진적으로 반영

4.2. Solvency Ⅱ 연착륙 효과

- **유럽보험시장 내 다양한 상품 구성 등의 특성을 반영한 여러 보완/경과조치 제시**
- **SCR비율 개선효과는 MA, TTP가 가장 크게 나타남**

- 대다수 보험회사는 VA를 선택

Solvency Ⅱ 보완/경과조치의 SCR비율 개선효과



자료: EIOPA Financial Stability Report(2017.12)

Ⅲ. 요약 및 시사점

1. 시장경쟁 인프라
2. 저금리 대응
3. 거시건전성 대응

1. 시장경쟁 인프라

- Solvency II는 시장 경쟁 인프라의 하나

  - 상품 및 가격 결정에 대한 **감독당국의 개입 최소화** 기초 위에서 설계

    → 소비자에게는 **과도한 보험료** 우려 해소와 보험회사에는 **적정 마진** 확보

  - 자유로운 시장 **진입과 퇴출을 전제**로 한 자본건전성 규제 설계

    → **시장경쟁은 건전성을 개선**하는 방향으로 작용 (Cummins et al., 2017)

    → 그러나 Solvency II가 정상 궤도에 오를수록 **시장집중도 심화 가능성**

- 시장경쟁 개선 여지가 있는 한국 보험시장

  - K-ICS가 **또 하나의 진입장벽**으로 작용할 가능성

  - **보험료**: '과도한 보험료 금지 원칙' vs. 시장경쟁

  - **상품 및 가격**: 규제 완화 vs. 비차익 의존 보험마진 (김석영 외, 2014)

2. 저금리 대응

- 1980년 이후 누적된 저금리 경험

  - 보험회사 상품구성과 자산구성은 1990년대부터 이미 변화가 진행 중

    → 보유계약 변화 없이 신계약과 자산 구성 변화만으로는 저금리 대응에 한계

  - 시가 적용 영향평가와 시장 수용능력에 기초한 로드맵 제시

    → 평균 듀레이션 12년 이상 보험부채의 장래손실: 단기간 내 보전 불가

    → 부채평가 할인율에 가산금리 허용 등 시장 수용성을 높이는 방향으로 진행

- 2000년 이후 저금리가 지속되고 있는 한국 보험시장

  - 저금리는 장기간 누적된 구조적인 문제: 유럽보험시장과 유사한 상황

  - K-ICS: '언제 시행하느냐'보다 '어떻게 시행하느냐'가 중요

    → 달성할 목표, 시행 시 영향평가, 목표 달성 경로 등을 구체적으로 제시

3. 거시건전성 대응

- 글로벌 금융위기 이후 Solvency II는 거시건전성 관점에서 저금리에 대응

  - 고수익 추구 등 **쏠림 현상을 방지**하고, 안전자산 집중과 같은 **경기순응성 완화**

  - 듀레이션 갭 등 보험회사 상품 및 자산 구성을 반영한 보완/경과조치 마련

- 시스템위험과 관련한 논의가 필요한 한국 보험시장

  - 지난 20여 년 동안 저금리에 노출된 보험사업모형은 금리 변동에 매우 취약

    → Solvency II 사례 적극적으로 벤치마킹 할 필요

  - 변액보험 등 **실적연동형 상품**의 비중 확대

    → 자본시장과의 연계성 확대 vs. 지속 가능한가? (소비자의 보험상품 가용성)

  - 한편, **사업모형 변화와 예금보험제도 등 정리제도**에도 주목

    → 보험 자본건전성 강화와 예금보험기금 간 조정(aligning) 필요

참고 문헌

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- EIOPA Statistics

감사합니다

Solvency II 관련 주요 쟁점

KIRI 국제심포지엄
『Solvency II가 유럽보험시장에 미친 영향과 시사점』
황인창 연구위원

목차

I. 개요

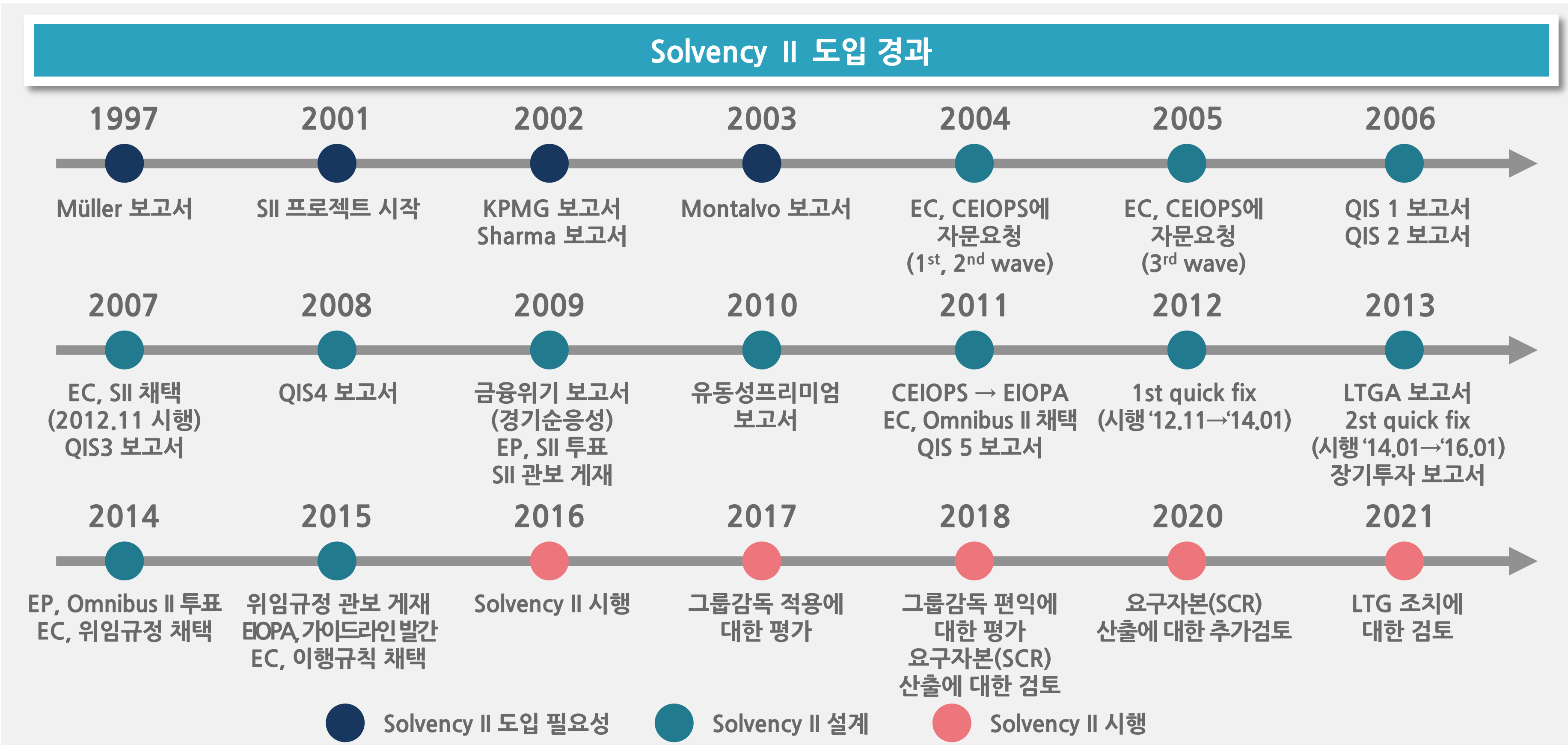
II. 주요 쟁점

III. 시사점

I. 개요

Solvency Ⅱ 도입 경과

- **2001년부터 본격적으로 프로젝트가 시작된 Solvency Ⅱ는 다양한 이슈에 대해 수 차례의 계량영향평가(Quantitative Impact Study: QIS)와 의견수렴 과정을 거쳐 2016년에 시행됨**
  - Solvency II 도입 과정은 크게 세 부분으로 나눌 수 있음: 제도 도입 필요성, 제도의 구체적인 설계, 제도 시행 이후 검토



II. 주요 쟁점

1. Solvency II 도입 필요성(2001~2003)
2. Solvency II 설계(2004~2015)
3. Solvency II 시행(2016~현재)

1. Solvency Ⅱ 도입 필요성(2001~2003) 1/3

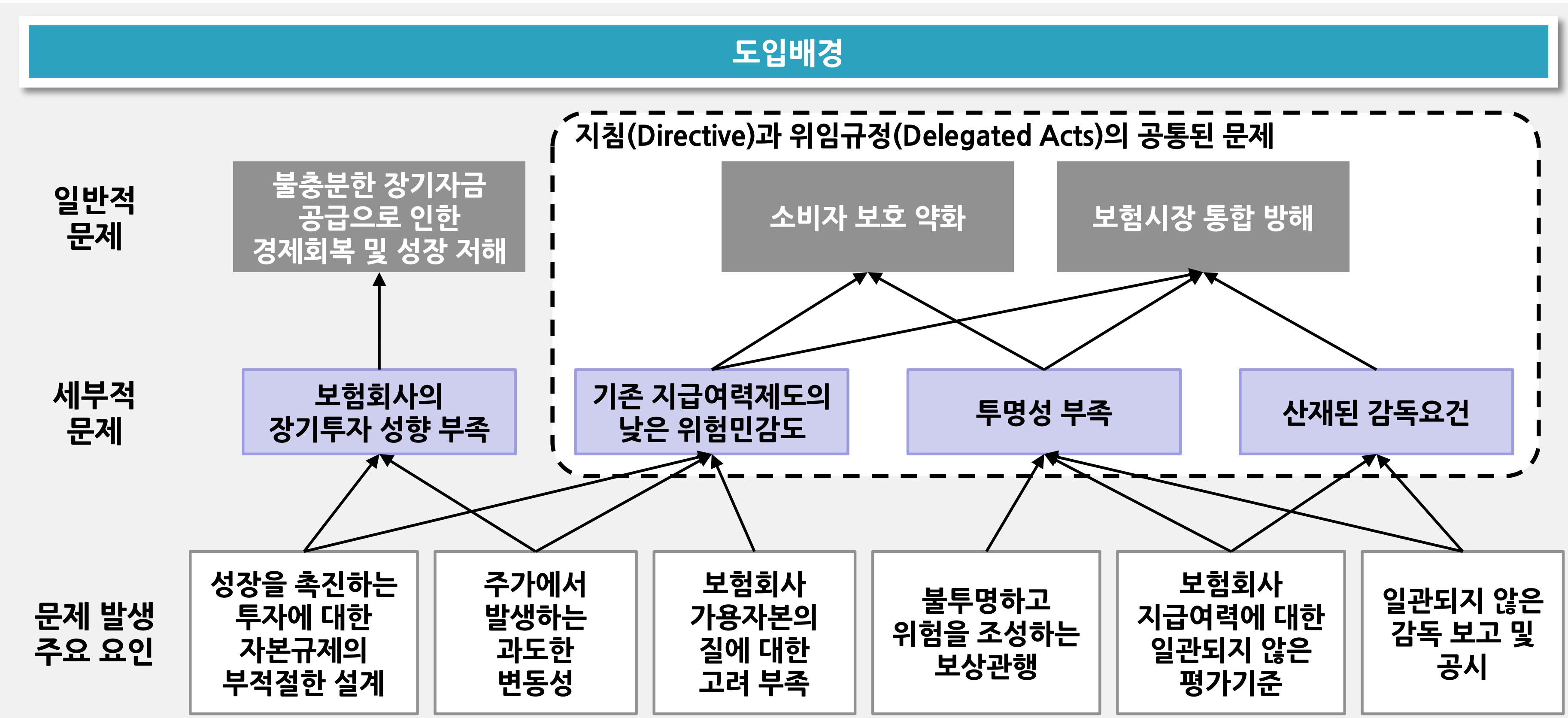
- Solvency Ⅱ 프로젝트 초기에는 보험회사 지급여력제도 관련 현안을 공론화하는 단계로 보험회사가 직면한 위험과 현행 제도 등을 분석하여 제도 개선의 필요성과 새로운 제도의 전반적인 틀을 논의함

주요 논의 내용

	논의 배경 / 평가 대상	제안 내용
Müller 보고서 (1997)	보험회사의 위험 기존 지급여력제도	보험회사 재무건전성 평가 시 추가적인 요인을 고려 금융당국이 조기에 조치를 취할 수 있도록 제도를 개선
KPMG 보고서 (2002)	보험회사의 위험, 보험부채, 자산 재보험 등 위험관리수단 시장규율 등	은행 부분에 적용되는 Basel과 같은 3축(3-pillar) 체계 제시
Sharma 보고서 (2002)	보험회사 실패 사례 금융당국의 감독방안	보험회사 재무건전성 평가 시 지배구조와 위험관리를 포함
Montalvo 보고서 (2003)	내부통제(internal control) 중요성 강조	내부통제시스템 실행(보험회사) 및 감독(감독당국)에 대한 원칙을 제시

1. Solvency Ⅱ 도입 필요성(2001~2003) 2/3

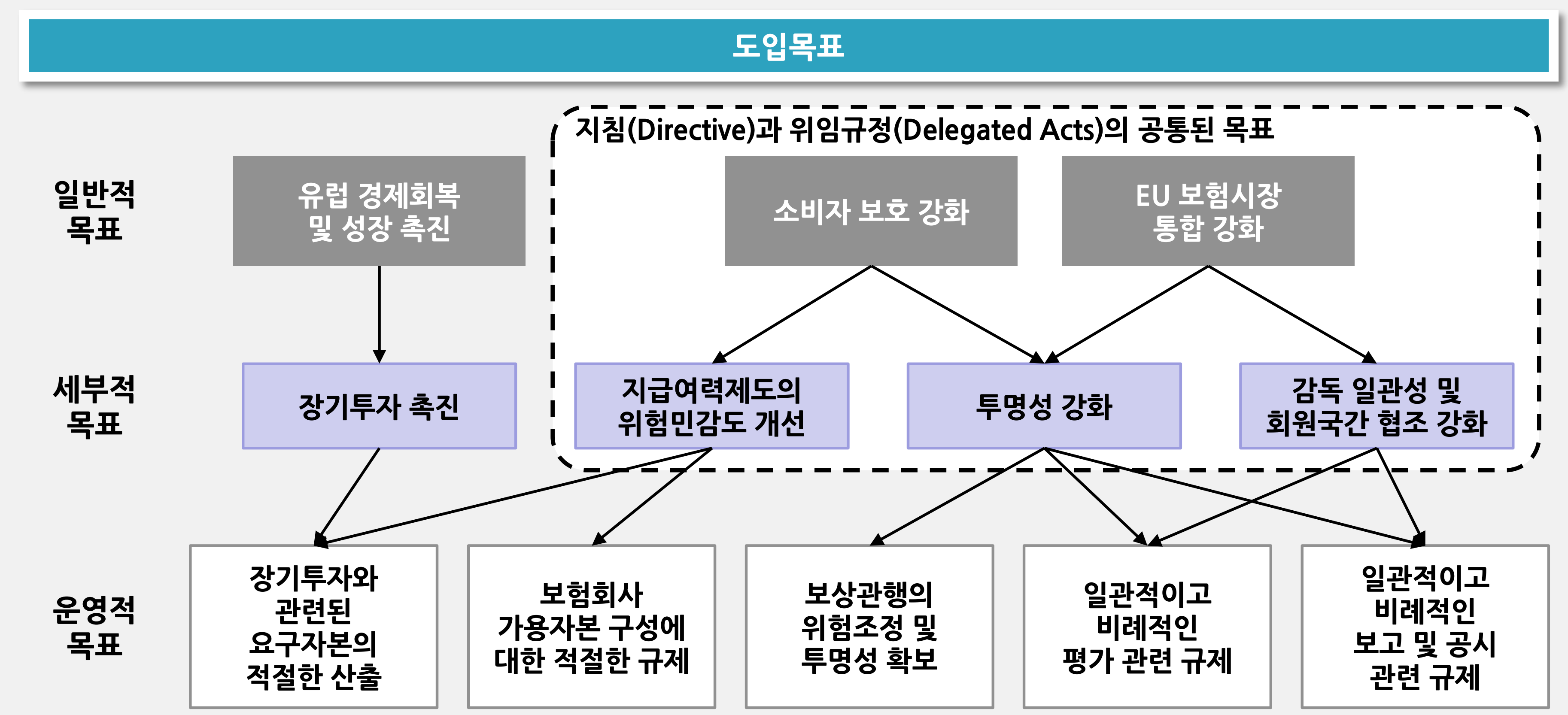
- 기존 지급여력제도의 낮은 위험민감도, 제도의 투명성 부족 및 산재된 감독요건으로 인해 소비자보호가 약화되고 보험시장 통합에 방해가 된다고 진단함



자료: EC(2014), “Commission Staff Working Document Impact Assessment”

1. Solvency Ⅱ 도입 필요성(2001~2003) 3/3

- 이러한 문제점을 해결하기 위해 지급여력제도의 위험민감도를 개선하고 투명성과 일관성을 강화시킨 3축 체계의 새로운 지급여력제도인 Solvency Ⅱ의 전반적인 틀이 완성됨
  : **① 손실흡수능력 평가, ② 위험관리 및 내부통제 시스템 평가, ③ 공시를 통한 시장 규율**



자료: EC(2014), “Commission Staff Working Document Impact Assessment”

2. Solvency Ⅱ 설계(2004~2015) 1/3

- **새로운 제도의 구체적인 세부사항을 결정하기 위해 대안을 모색하는 단계로 넘어감**
  - 다양한 이슈에 대해 수 차례의 계량영향평가(Quantitative Impact Study: QIS)와 의견수렴 과정을 거침

계량영향평가별 주요 쟁점

	평가 대상	평가 결과
QIS 1	제도 변화에 따른 책임준비금	책임준비금: 감소 (영향이 가장 큰 요인: 현재가치할인)
QIS 2	위험마진 산출방법론 요구자본 산출방법론	책임준비금: 일반적으로 감소 요구자본 및 가용자본: 일반적으로 증가
QIS 3	제도 변화에 따른 재무상태표 요구자본 산출방법의 적절성 등	지급여력비율: 기존 제도(Solvency Ⅰ)에 비해 감소 요구자본 산출방법의 실행가능성 및 적합성: 적절
QIS 4	유럽 보험회사들의 Solvency Ⅱ 이행 독려	위험과 보상 측면에서 자본재분배가 필요
QIS 5	각국 금융당국과 보험회사의 Solvency Ⅱ 준비상태 파악 금융위기	상당수 보험회사가 새로운 지급여력기준을 충족시키지 못함

2. Solvency Ⅱ 설계(2004~2015) 2/3

- **글로벌 금융위기 이후 Solvency Ⅱ의 수용가능성과 경기순응성이 주요 이슈로 부각됨**
  - 상당수의 보험회사에 대해 감독조치가 요구되거나(MCR 미충족), 모니터링 대상(SCR 미충족)으로 예상됨
  - 위기 상황 발생 시 보험회사가 보유한 위험자산을 급매하고, 단기 · 안전자산에 집중하는 유인을 제공함

계량영향평가 결과 요약

	QIS 1	QIS 2	QIS 3	QIS 4	QIS 5	LTGA (기본)	LTGA (조정)
평가시점	2005	2006	2007	2008	2010	2012	2012
참여회사 수	272	514	1027	1412	2520	427	427
시장점유율	44%	60%	>65%	>75%	>85%	70%	70%
MCR 미충족	N/A	N/A	2%	1.20%	4.60%	28%	10%
SCR 미충족	N/A	N/A	16%	11%	15%	46%	29%

자료: Pradier and Chneiweiss(2016), "The Evolution of Insurance Regulation in the EU Since 2005"

2. Solvency II 설계(2004~2015) 3/3

- QIS 5의 결과 보완과 Omnibus II 지침에 대한 합의를 이끌어내기 위해 장기보증영향평가(Long-Term Guarantee Assessment: LTGA)를 실시함
- 평가 결과를 바탕으로 장기보증조치(long-term guarantees measures) 등 추가조치를 도입함
  : 제도 변화로 인한 급격한 재무적 영향을 완화 + 제도 도입 이후 과도한 변동성 발생 완화

LTGA를 통해 도입된 추가조치

보험부채 평가금리	무위험이자율 외삽	장기 무위험이자율 추정 시 장기선도이자율(Ultimate Forward Rate: UFR)에 수렴하는 외삽법을 이용
보험부채 평가금리	매칭조정 및 변동성조정	무위험이자율에 금리를 가산
주식위험	대칭적 조정	주식위험 시나리오를 대칭적으로 조정하여 주식위험의 급격한 변화 완화
주식위험	듀레이션 기반 주식투자	특정 조건을 만족하는 퇴직연금을 취급하는 생명보험회사의 경우, 주식위험을 완화
경과조치	무위험이자율	SII 도입 전후의 무위험이자율 차이를 16년간 점진적으로 반영
경과조치	책임준비금	SII 도입 전후의 책임준비금 차이를 16년간 점진적으로 반영
경과조치	주식위험	SII 도입 전에 취득한 주식 관련 위험을 7년간 점진적으로 반영
경과조치	집중 및 스프레드 위험	집중 및 스프레드위험을 4년간 단계적으로 반영
경과조치	보고 및 공시 제출기한	보고 및 공시 제출기한을 4년간 연장, 추가 연장 기간을 점진적으로 축소
회복기간 연장		특별한 상황 하에서 회복기간을 최대 7년까지 연장함

3. Solvency Ⅱ 시행(2016~현재)

- 2016년 Solvency Ⅱ 시행 이후 ① 정책 목표가 달성되고 있는지, ② 의도하지 않은 부작용이 발생하는지 등을 살펴보기 위해, Solvency Ⅱ 시행 효과에 대해 평가하고 이를 바탕으로 제도를 제/개정할 예정임

향후 계획된 주요 검토 사항

구분	검토 사항			
그룹감독 (2017, 2018)	그룹감독의 범위와 감독권(supervisory power)의 차이 → 회원국간 협업 중요성 강조			
	내부모형과 관련하여 회원국간 일관성을 높일 필요			
요구자본(SCR) 산출 (2018, 2020)	과도한 비용 발생		보험회사의 장기투자를 제약	
	SCR 산출 표준모형(standard formula) : 방법론(method), 가정(assumption), 표준모수(standard parameter)의 적합성 평가			
장기보증조치 등 추가조치 (2021)	보험회사 재무상태	보험회사 투자활동	소비자 가용성	금융안정성

Ⅲ. 시사점

시사점

- 향후 국내 보험회사에 새롭게 적용될 지급여력제도인 K-ICS가 EU의 Solvency II와 매우 유사한 구조를 가졌다는 점에서 Solvency II 관련 주요 쟁점에 대한 논의들은 우리에게 많은 시사점을 제공함

Solvency II 관련 주요 쟁점이 주는 시사점

신제도 도입 필요성	신제도의 실행목표 설정	위험관리 및 내부통제 시스템 평가 중점		
구체적인 제도 설계	목적부합성	평가(산출)가능성	신제도 도입에 따른 재무적 영향	
제도 시행 이후 검토	보험회사 재무건전성	보험회사 투자활동	소비자 가용성	금융안정성

감사합니다

SOLVENCY II

Implications for the Asset Management Industry

November 30th, Thomas Moser

MSCI

AGENDA

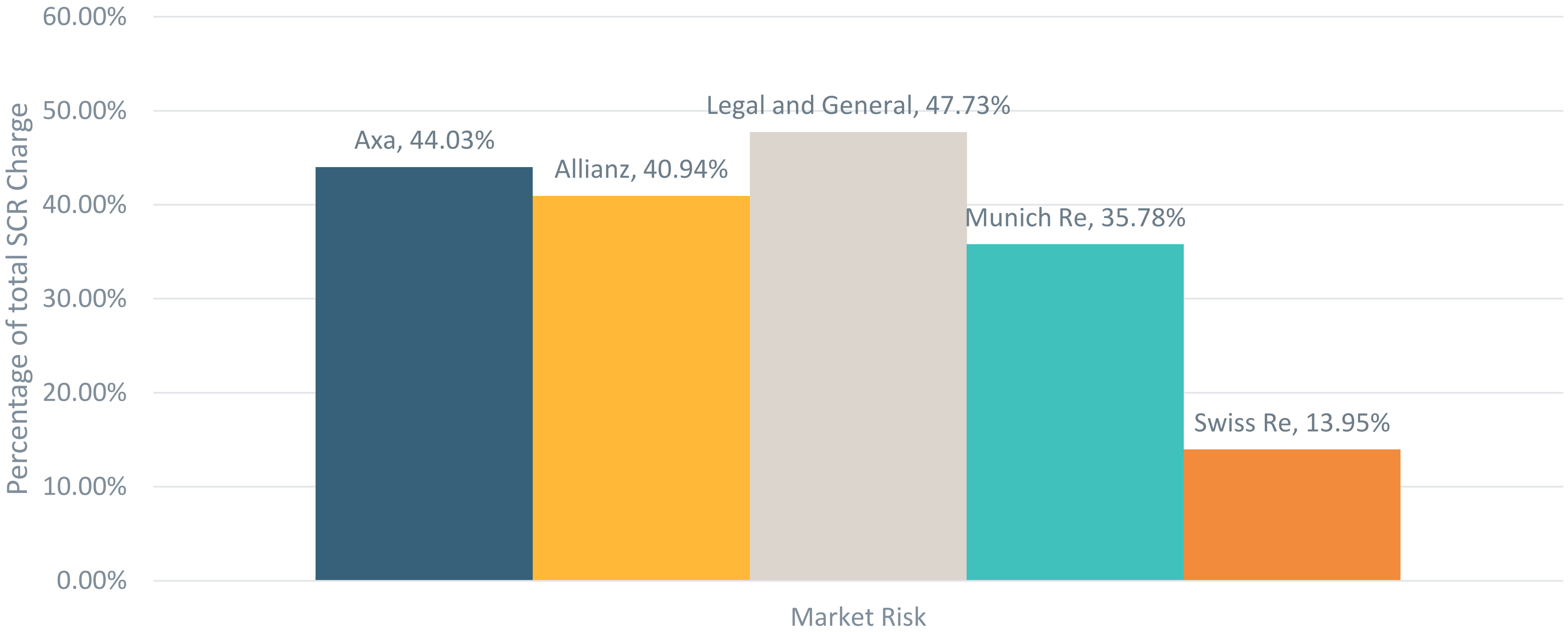
- A relevant topic worth discussing with MSCI
- Solvency II challenges European Insurance companies have faced
- Their experienced impact to the Asset Management Industry
  - Solvency Capital Ratio calculation
  - Data exchange
- Conclusions

MSCI

A RELEVANT TOPIC WORTH DISCUSSING

- Insurers own approx. $30 trillion assets which represents about 30% of the globally listed institutional assets.

- Market risk is often the largest component of Solvency Capital Requirements for the six of Europe's biggest insurers in 2017:



MSCI

MSCI CLIENT BASE AND EXPERIENCE

40+ YEARS IN BUSINESS | **33** GLOBAL LOCATIONS | **2,600+** EMPLOYEES | **7,500** ACTIVE CLIENTS

INDEXES

- MSCI ACWI Index
- MSCI World Index
- MSCI Emerging Markets Index
- Factor Indexes
- Thematic Indexes
- ESG Indexes
- Real Estate Indexes
- Custom Indexes

850+ ETFs are based on MSCI indexes, more than any other index provider[1]

Over USD 10 Trillion in assets are benchmarked to MSCI Indexes[2]

94% of US pension fund assets invested in global equities are benchmarked to MSCI[3]

180,000 Indexes calculated daily; 10,000 in real time

ANALYTICS

- Risk Management
- Portfolio Construction
- Investment Differentiation
- Regulatory Reporting
- Performance Attribution
- Managed Services

MSCI Global Risk and Performance Engine runs up to 1 Trillion calcs/day

2 Million time series

17+ Million client positions

52 Global FI markets

1,300+ issuer curves

ESG RESEARCH

- MSCI ESG Ratings
- MSCI ESG Screening
- MSCI ESG Governance Metrics
- MSCI ESG Fund Metrics
- MSCI ESG Carbon Tools
- MSCI Sustainable Impact
- MSCI ESG Research

World's largest provider of Environmental, Social and Governance (ESG) data and research[4]

47 of top 50 global asset managers[5] 900+ clients including 125 asset owners

220+ dedicated full time staff globally to ESG business, including 150+ ESG research analysts[6]

REAL ESTATE

- Real Estate Performance
- Real Estate Research
- Private (Direct and Indirect)
- Public Equity

Global leader in Real Estate performance analysis and risk services

In over 30 markets worldwide

Analysis tools that can be applied to all types of Real Estate

97 of the top 100 global **Asset Managers** are MSCI clients[7]

90 of the top 100 global **Asset Owners** are MSCI clients[7]

79 of the top 100 global **Hedge Funds** are MSCI clients[7]

87 of the top 100 global **Banks** are MSCI clients[7]

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[1]As of Sep 30, 2016; defined as each share class of an exchange traded fund, as identified by a separate Bloomberg ticker. Only primary listings, and not cross-listings, are counted; [2]As of Jun 30, 2016, as reported on Sep 30, 2016 by eVestment, Morningstar and Bloomberg; [3]As of Jun 30, 2016, as reported on Sep 30, 2016 by eVestment, Morningstar and Bloomberg. [4]By coverage and/or staff based on public information produced by Sustainalytics, EIRIS, Trucost, as of Aug 2015; [5]Based on P&I AUM data as of Dec 2014 and MSCI clients as of Jun 2015; [6]Source: MSCI ESG Research as of Jun 2015; [7]Based on P&I AUM data as of Dec 2015 and MSCI data as of Dec 2016.

SOLVENCY II KEY CHALLENGES

Pillar 1: Quantitative Requirements	Pillar 2: Qualitative Requirements	Pillar 3: Disclosure & Reporting Requirements

• Market consistent valuation of assets and liabilities
• Calculation of Solvency Capital Requirements
• Minimum Capital Requirement
• Demands on investments
• Tiering requirements for own funds
	• Supervisory review process
	  • Intervention power of supervisor
	  • Governance system
	  • Internal controls
	  • Risk management systems
	  • Own Risk and Solvency Assessment
	  • Outsourcing asset management function
	• New options of regulatory control
		• Extensive reporting obligations
		  • Report on Solvency and Capital Resources
		  • Regular Reports to Regulatory Bodies
		  • Details of individual items
		  • Annual and quarterly reports

- Enhanced data and analytical requirements are among the key challenges European Insurance companies have faced.

MSCI

INVESTMENT PROCESS

Product Development

- Survey of investors requirements
- Definition of optimal portfolios
- SCR calculations for the development of efficient portfolios
- Comparison with benchmarks

Institutional Sales

- Definition of model portfolios and client products
- SCR calculations for investment funds and model portfolios for RFPs
- Proof of reporting capabilities

Portfolio Management

- Calculation of customized benchmarks
- Determination of the effects of investment decision on the SCR as part of the investment process
- Putting optimal investment decisions into effects

Investment Controlling

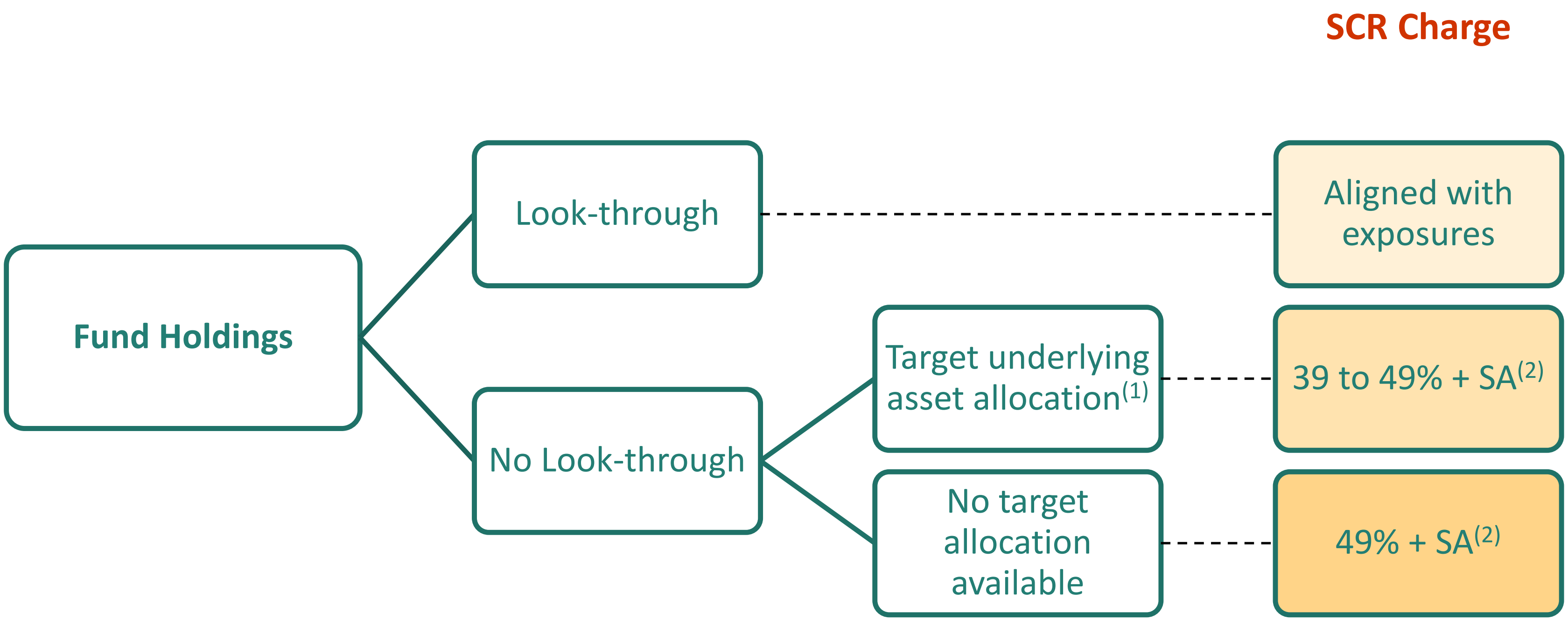
- Current calculation of figures relevant for the investment guideline monitoring
- Investment guideline monitoring in accordance with Solvency II related product characteristics

Institutional Reporting

- Reporting according to Solvency II (Asset QRTs and contribution to SCR)

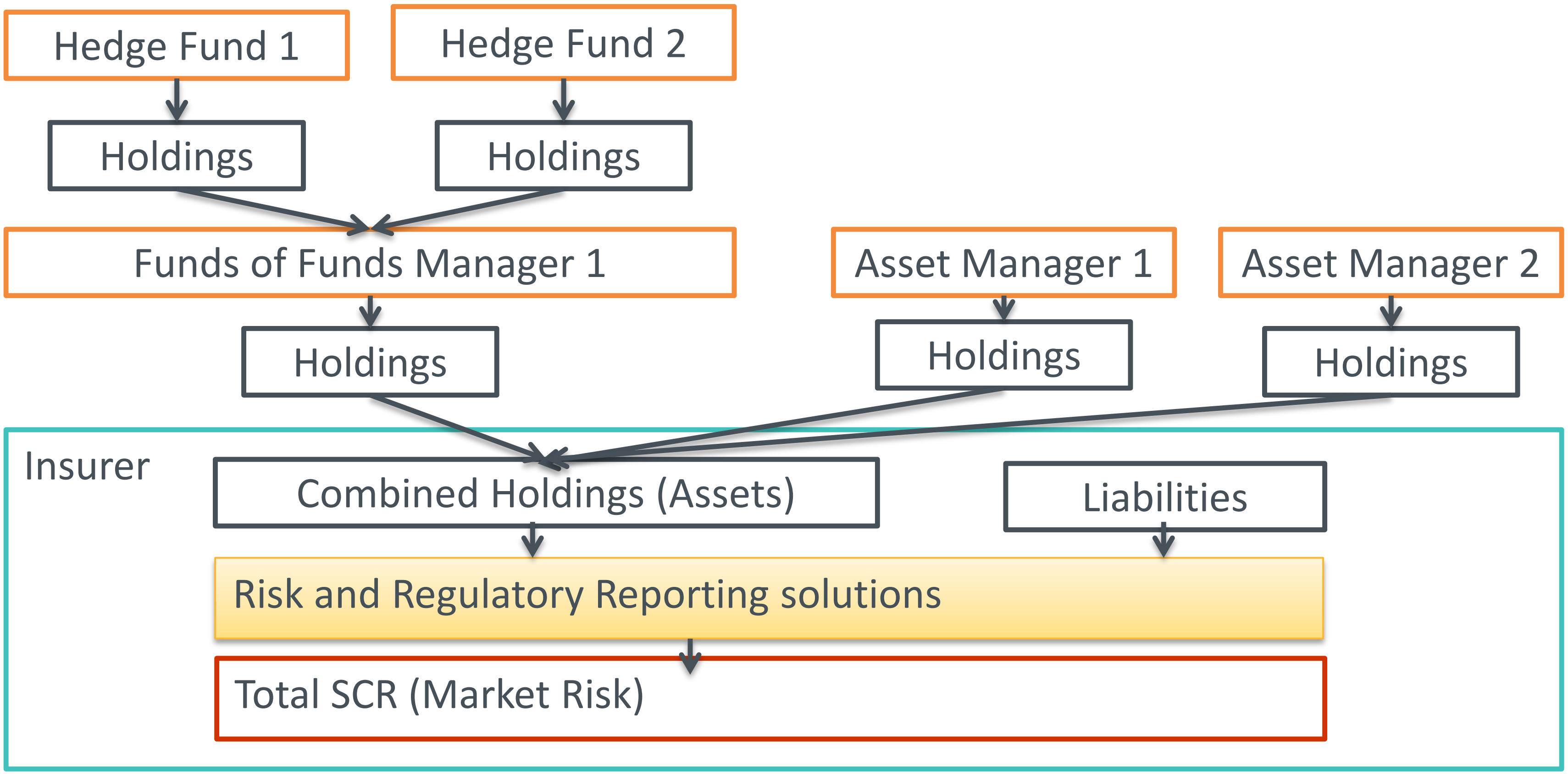
SOLVENCY REWARDS TRANSPARENCY

- Regulatory charge varies with level of look-through:



1. *There is a restriction on percentage of asset that may be reported using Target Asset Allocation approach*
2. *Symmetric Adjustment*

DIRECT LOOK THROUGH APPROACH



- Advantages: Hedge Funds and Asset Mangers only have to provide data; Works for internal and standardized approach
- Disadvantages: Hedge funds need to provide transparency on holding level; Insurer needs to be able to price all instruments traded and have all necessary market data

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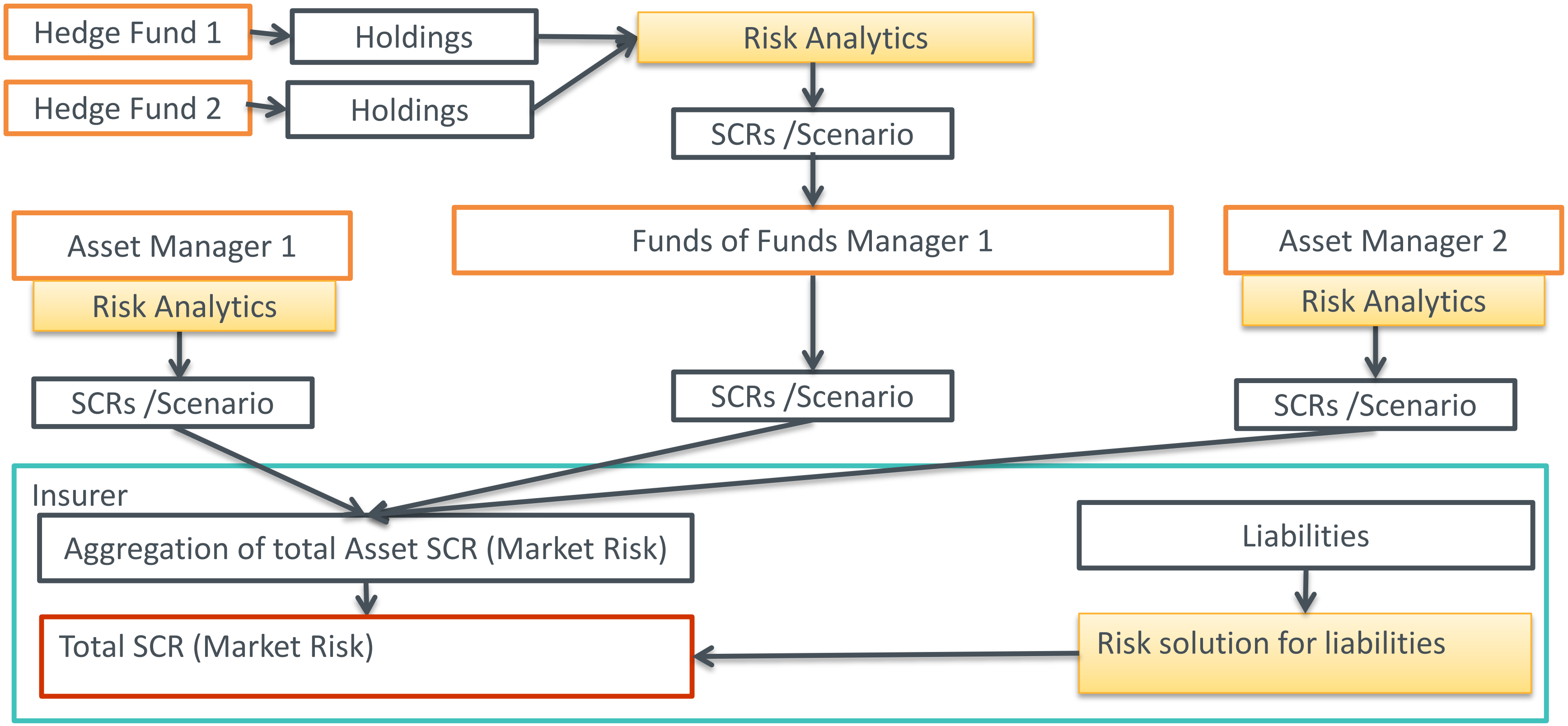
INDIRECT LOOK THROUGH APPROACH



- Advantages: Hedge Funds and Asset Mangers can reuse know-how and systems already in place for portfolio valuation and pricing
- Disadvantages: Insurer needs to control quality and models used by the Asset Mangers; Only works with standardized approach.

DATA EXCHANGE

- Industry associations developed a standard template for exchanging data between Asset Managers and Insurance Companies efficently

- The Tripartite template includes
  - Portfolio characteristics and valuations
  - Instrument codification
  - Valuations and exposures
  - Instrument characteristics & analytics
  - Transparency (optional)
  - SCR calculations (optional)

CONCLUSIONS

- European Insurance companies are relying on Asset Managements to provide them data required for Solvency II reporting.

- The standard template for data exchange created by Industry Associations has reduced the complexity of Solvency II implementations.

- Even though it has not become best practice that the Solvency Capital Ratio is calculated by the Asset Managers they have equipped themselves with the necessary analytical tools to use them as part of the Institutional Sales, Product Launch or Optimization process.

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Our line of products and services includes indexes, analytical models, data, real estate benchmarks and ESG research.

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30 NOVEMBER 2018

CAPITAL MANAGEMENT IN THE SOLVENCY II WORLD

Impacts of Modernising Insurance Solvency Regimes on Insurance Industry

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Cross Asset Research

ALIGNMENT OF CAPITAL MANAGEMENT

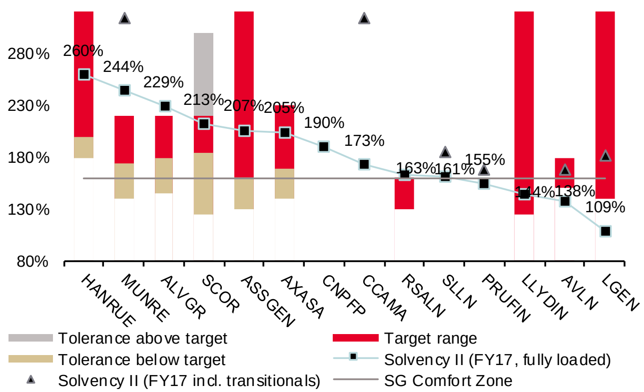
Pre-Solvency II

- Return on Equity Targets (public)
- Dividend Payout Ratios (public)
- Leverage Ratios (public)
- Rating Agency Models (public/private)
- Corporate Law Restrictions (public)

Solvency II

- Solvency II Ratios
- RT1, T2, T3 size limits
- SCR management

Solvency II ratios (FY17)



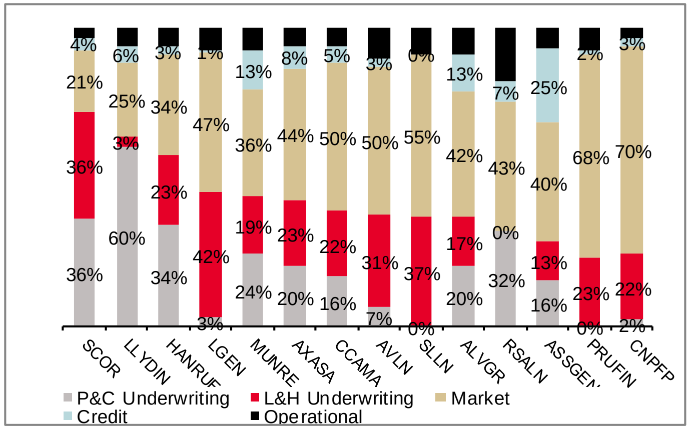
Source: SG Cross Asset Research/Credit

Trends

- Capital management of most insurers based on "fully loaded" Solvency II
- UK life insurers and Groupama applying transitionals
- "Comfort Zone" >160%; "Hard Bottom Line" >140%
- Strongest names with most explicit capital management
- Short-term thinking of weaker names, "kicking the can" with transitionals

RISK PROFILE

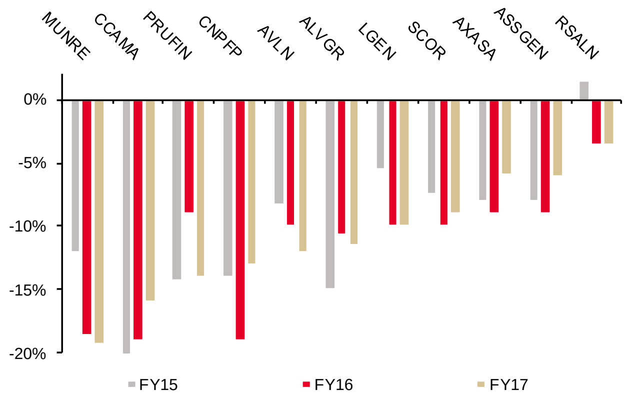
SCR by risk category



Life insurers in the hands of the market

- Many retail insurers overexposed to market and credit risks
- Volatile Solvency II ratios and little diversification
- Reinsurers mostly underwriting-focused
- Market risks to a large extent interest-rate risks
- Underwriting risk to a large extent catastrophe risk, i.e. little exposure for retail and life business

Interest Rate Sensitivity (-50bp stress)



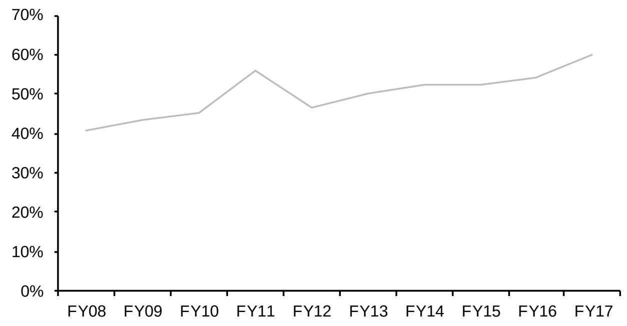
Back book management actions

- Interest-rate risk significant for most insurers
- Sale of back books of Generali Leben, Generali Belgium, AXA Life Europe, AEGON Ireland
- Exit from UK life of Prudential, Standard Life Aberdeen
- L&G disposal of European operations
- Munich Re JV with IBM

Source: SG Cross Asset Research/Credit

EXCESS CAPITAL DISTRIBUTION – DIVIDENDS/SHARE BUYBACKS

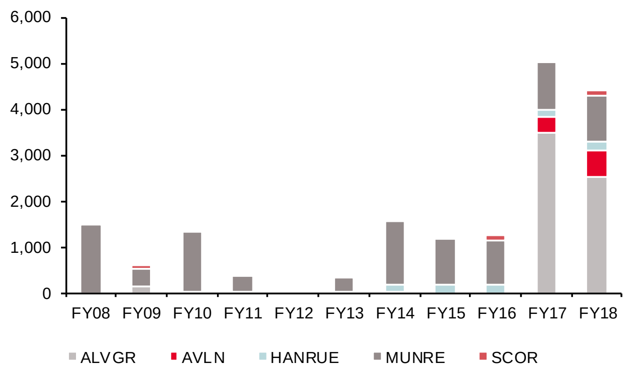
Regular Dividend Payout Ratio (average)



Regular distributions rising slowly

- **Long-term trend to increase payout ratios**
- **Regular dividend not used for capital management**
- **Regular dividend to manage shareholder expectations**
- **Solvency II not a game changer**

Share Buybacks/Special Dividends



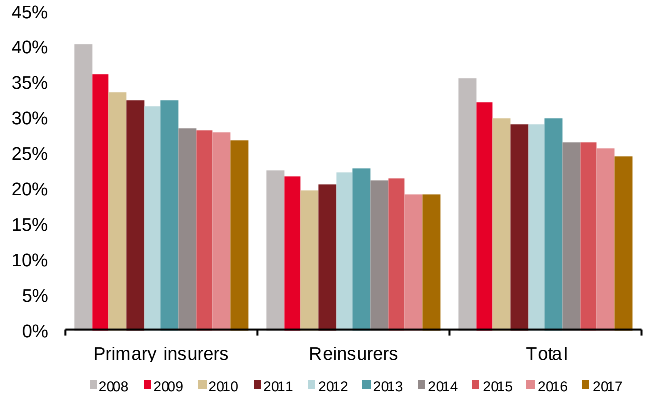
Strong rise of share buybacks under Solvency II

- **Number of share buyback programs/special dividends doubled in FY17**
- **Clear definition of Solvency II targets quantified excess capital**
- **Investor expectation either to deploy excess capital into growth or to distribute**
- **Limited growth opportunities lead to high distributions**

Source: SG Cross Asset Research/Credit

EXCESS CAPITAL DISTRIBUTION – HYBRID DEBT

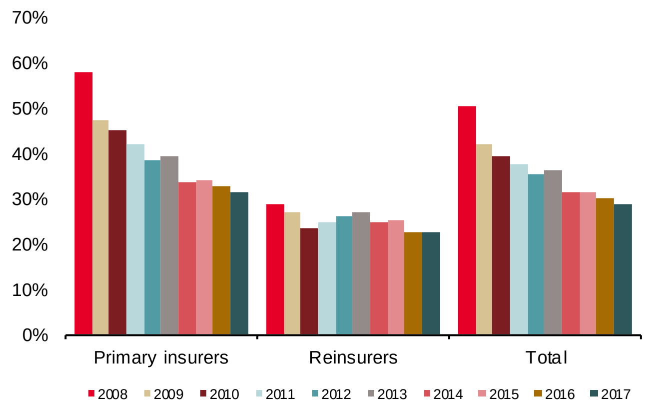
Leverage (basic)



Pre-Solvency II

- Clear deleveraging trend
- Aiming to avoid breaches of size limits
- Generation of excess capital
- Still high new issue activity

Leverage (TNAV)



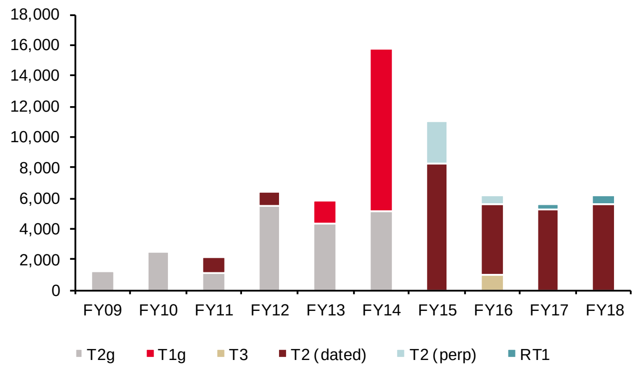
Solvency II

- New issue activity slowing down
- Distribution of excess capital
- T2/3 size limits in force
- Leverage in reinsurance troughed

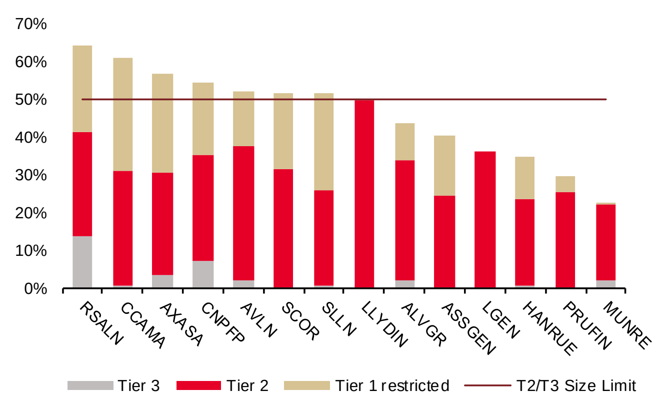
Source: SG Cross Asset Research/Credit

CHANGE IN CAPITAL STRUCTURE

New issues (EUR)



Capital Structure (% of SCR)



Source: SG Cross Asset Research/Credit

Cyclical activity

- **2008-09: market closed/Solvency II uncertainty**
- **2010-13 more Solvency II certainty, Solvency II-type issues**
- **2014-15: last minute use of grandfathering regime (incl. French bancassurers)**
- **2015-17: low rates, almost exclusively T2**
- **2018: Some RT1 issuance, but cyclical slowdown (incl. EUR2.0bn AXA T2, EUR0.5bn Phoenix T2 due to M&A)**

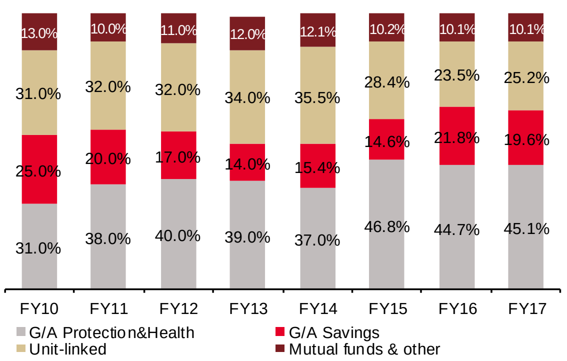
Trending to T2

- **Trend to issue out of Holding company**
- **Trend to replace old perps with T2 or use of excess capital to deleverage**
- **RT1 tax issues, in particular in UK (from 2019) and Germany**
- **No breaches of T2/3 size limits, leeway to replace legacy perps**
- **Growth of book to increase T2/T3 flexibility**
- **Capital quality not always a decisive factor**
- **New RT1 only from Aegon, Allianz and small/mid-sized insurers**

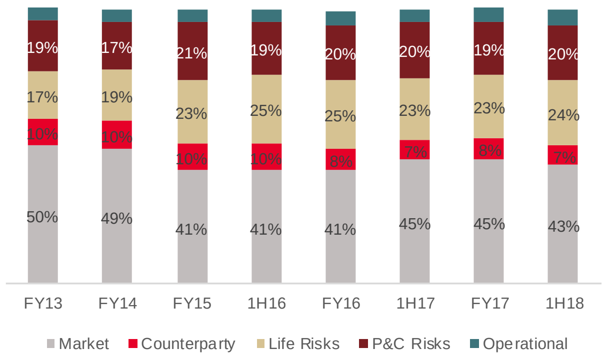
THE AXA STORY

THE ROAD TO XL

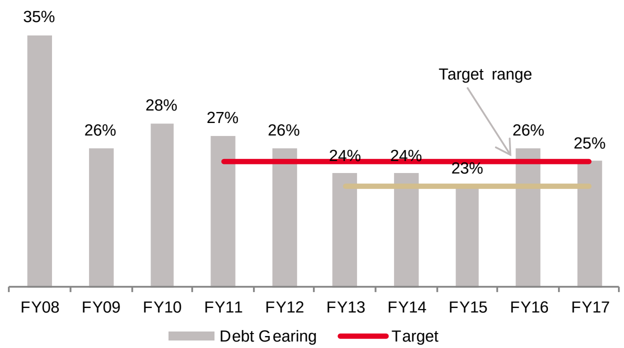
New Business Mix (Life)



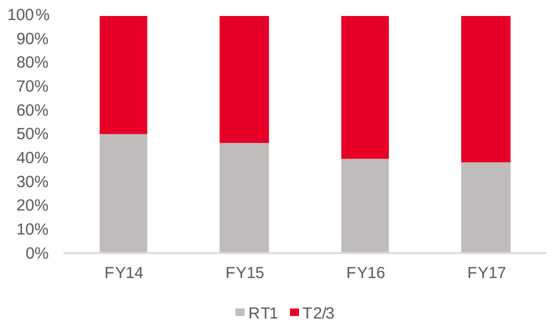
SCR by Risk Category



Debt Gearing (reported)



Capital Structure (RT1 vs T2/3)



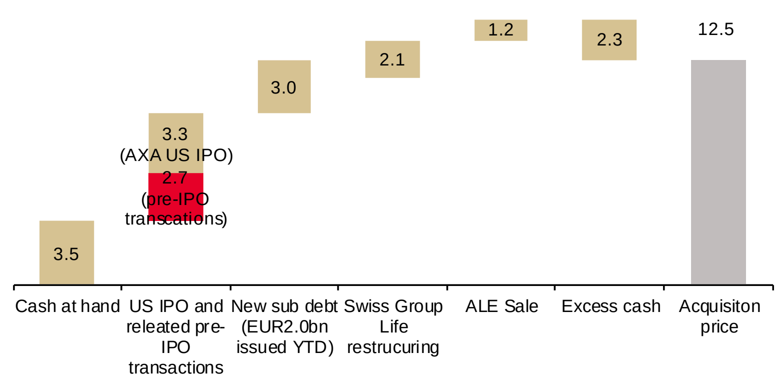
Source: SG Cross Asset Research/Credit

AXA'S ACQUISITION OF XL (1/2)

Deal rationale	Funding	Financial impact
- Large transformational deal - Exiting Life/AM-focused strategy - New focus on underwriting rather than fee business - Acquisition complemented by IPO of AXA US and subsequent sell-down of remaining stake - Exit of US Life & Savings business	- Price tag: USD15.0bn (EUR12.4bn), 100% cash - EUR3.5bn from existing cash resources - EUR6.0bn proceeds from AXA US IPO (up to 25%) - EUR3.0bn sub debt (of which only EUR2.0bn issued) - Back book management (additional EUR3.3bn)	- Leverage to increase temporarily, but committed to deleveraging - Solvency II ratio to decline to 190-200% - Improving risk profile - Sell-down of AXA US stake to reduce leverage again

Short term: deteriorating credit metrics; medium/long term: credit positive

Transaction funding (EURbn)



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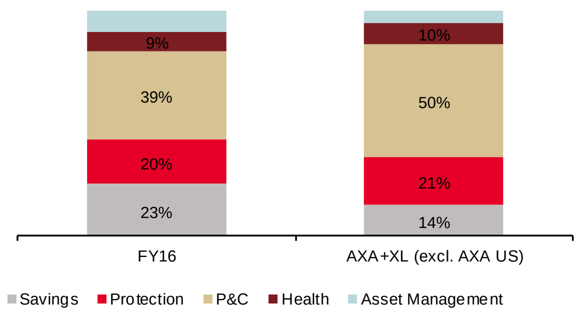
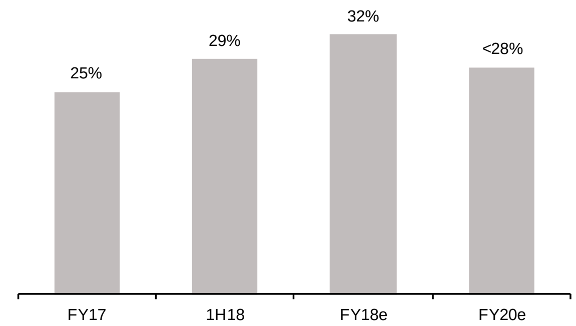
AXA'S ACQUISITION OF XL (2/2)

Business Mix



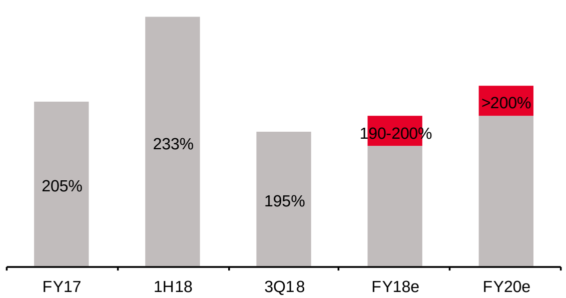
Source: SG Cross Asset Research/Credit

Debt Gearing (reported)



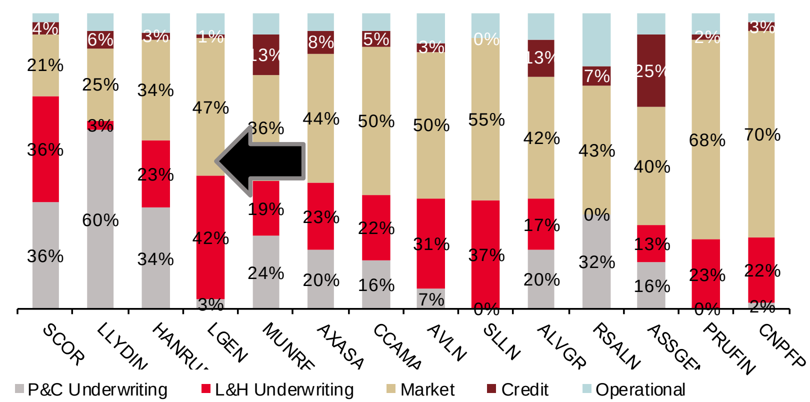
Source: SG Cross Asset Research/Credit

Solvency II Ratio



Source: SG Cross Asset Research/Credit

SCR by Risk Category (FY17)

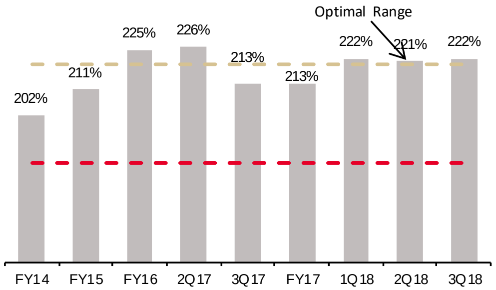


Source: SG Cross Asset Research/Credit

ADDENDUM

CAPITAL MANAGEMENT – EXAMPLES (1/2)

Scor - Solvency

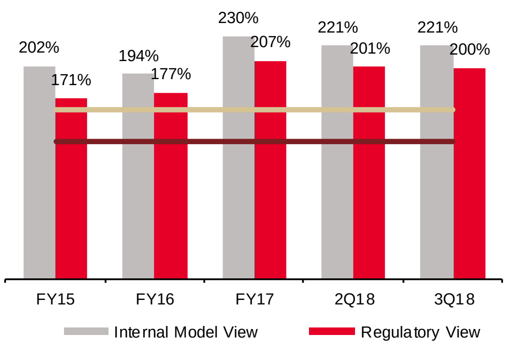


Scor – Strong Capital Management

- **>220%: redeploy capital (M&A, growth, special dividend, share buyback)**
- **185-220%: Target Range**
- **150-185%: Adapt underwriting, retro and investment strategy; consider ILS and securitisations**
- **125-150%: Issue hybrid, reduce dividend, slow down growth, reconsider risk-profile**
- **100-125%: PP, large capital relief deal, rights issue, restructure activities**

→ **3Q18: Share buyback program**

Generali - Solvency



Generali – Medium Capital Management

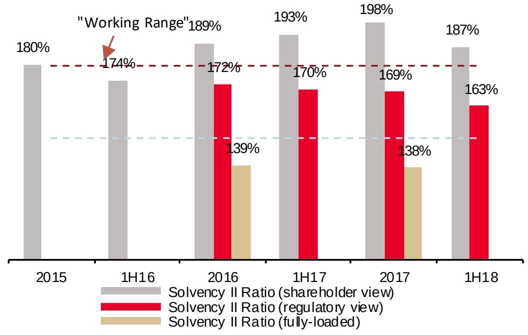
- **No upper limit for excess capital**
- **Full internal model still pending approval**
- **160%: "Soft Limit" but no explicitly pre-defined actions**
- **130%: "Hard Limit" but no explicitly pre-defined action, but implicitly hybrid, rights issue**
- **Limits calibrated to regulatory partial internal model**

→ **3Q18: No action**

Source: SG Cross Asset Research/Credit

CAPITAL MANAGEMENT – EXAMPLES (2/2)

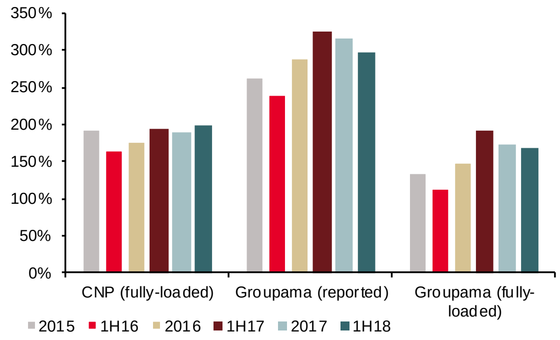
Aviva - Solvency



Aviva – Weak Capital Management

- Application of transitionals
- 150-180%: "Working Range" ("shareholder view" incl. transitionals)
- No "hard bottom line"
- No capital management based on regulatory metrics

CNP/Groupama - Solvency



CNP/Groupama – No Capital Management

- No Solvency II target ranges
- No "hard bottom line"
- No ROE targets
- No dividend policy

Source: SG Cross Asset Research/Credit

APPENDIX

Report completed on 19 Nov, 2018 22:44 CET

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HOLD: Indicates likely to be within 5% of the performance of its iBoxx subsector
SELL: Indicates likely to underperform its iBoxx subsector by 5% or more

INDIVIDUAL CDS RECOMMENDATIONS:

SG Credit research evaluates its expectation of how the 5 year CDS is going to perform vis-à-vis its sector.
SELL: CDS spreads should outperform its iTraxx sector performance
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NEUTRAL: Sector spread should perform in line with its iBoxx corporate index
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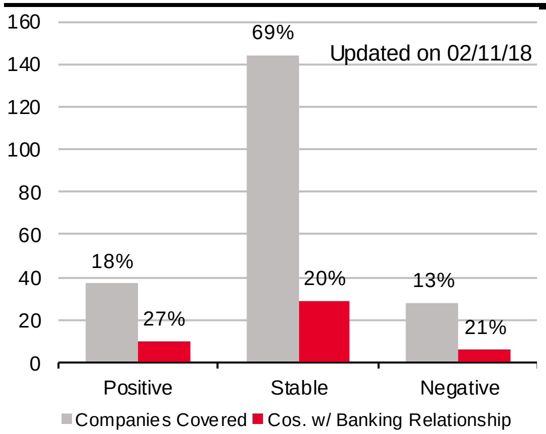

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- Alternative View
- ETF Research
- Technical Analysis

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#1 Global Strategy

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- Rates & Forex Strategy
- EM Strategy
- Credit Strategy
- Credit Sectors

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9 Sectors in the Top 5
17 Sectors in the Top 10

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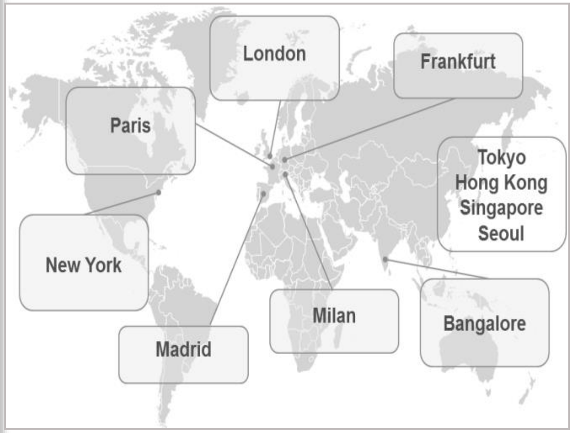
A global footprint



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9 Sector Research Teams in the **Top 5**

17 Sector Research Teams in the **Top 10**