Updated for 2012 former G-SIBs

Cross industry analysis
28 G-SIBs vs. 28 Insurers
Comparison of systemic risk indicators

12 February 2013

John H Fitzpatrick, Economist Conference, London

Summary

- The Financial Stability Board (FSB) intends to designate Global Systemically Important Insurers (G-SIIs) in early 2013. The International Association of Insurance Supervisors (IAIS) has suggested a methodology to determine which insurers are designated as G-SIIs.
- Most policy makers acknowledge and believe that insurers are different from banks and carry less systemic risk. However, no quantitative comparison of insurers to banks using the relevant criteria of the FSB/IAIS has been available to date.
- This benchmarking study is the first ever comparison between the 28 named Global Systemically Important Banks (G-SIBs) and 28 of the largest global insurers.

Summary (Cont'd)

- The benchmark study takes 17 indicators that are comparable between insurers and banks to provide an analysis of the size of each activity.
- These 17 indicators were required by the IAIS data calls.
- It shows that insurers are significantly smaller than banks in most of the 17 indicators.
- Fundamentally it should be noted that insurers match assets with liabilities and are thus less exposed than banks to the systemic risk of maturity transformation (borrowing short to lend long) and carry substantially lower positions in derivatives.
- Significantly smaller amounts of short term funding show that insurers are much less interconnected with the financial system than banks.
- The purpose of this analysis is to provide policymakers and other stakeholders with a factual analysis that quantifies the systemic risk of banks versus insurers using comparable criteria required by the IAIS data calls.

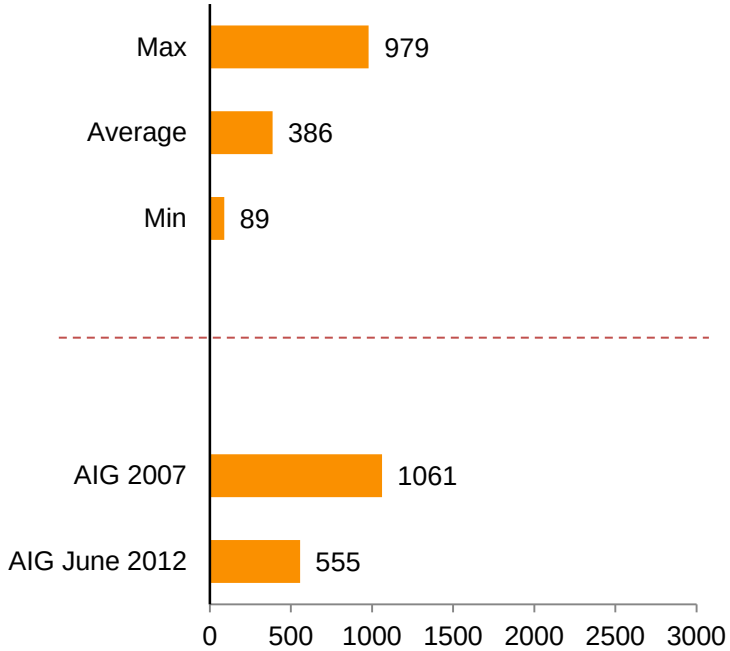
Comment on update of study: now including the 3 ex-G-SIBs – Former named G-SIBs removed from G-SIB list 2011 by FSB

- Objective was to compare the same 28 insurers with the 3 banks that were removed from the G-SIB list issued in 2012 due to their reduced systemic risk
- Similarly to the comparison with the 28 G-SIB 2012 companies, The Geneva Association based the comparison on published information
- In most of the compared indicators the 3 removed banks are still significantly larger than the largest insurers selected
- This holds mainly true for all indicators related to non-insurance activities as defined in the IAIS methodology and the indicators related to interconnectedness with the financial service industry overall
- This additional comparison demonstrates that along with the G-SIBs, other non-G-SIBs are significantly more dependent on 3rd party short term funding than the largest insurers and thus more exposed to maturity transformation risk
- This addition to the cross industry analysis published in December 2012 highlights the need to establish a G-SIFI designation methodology which enables a comparison of identical indicators of companies from different sectors within the financial service industry

Size – Total assets

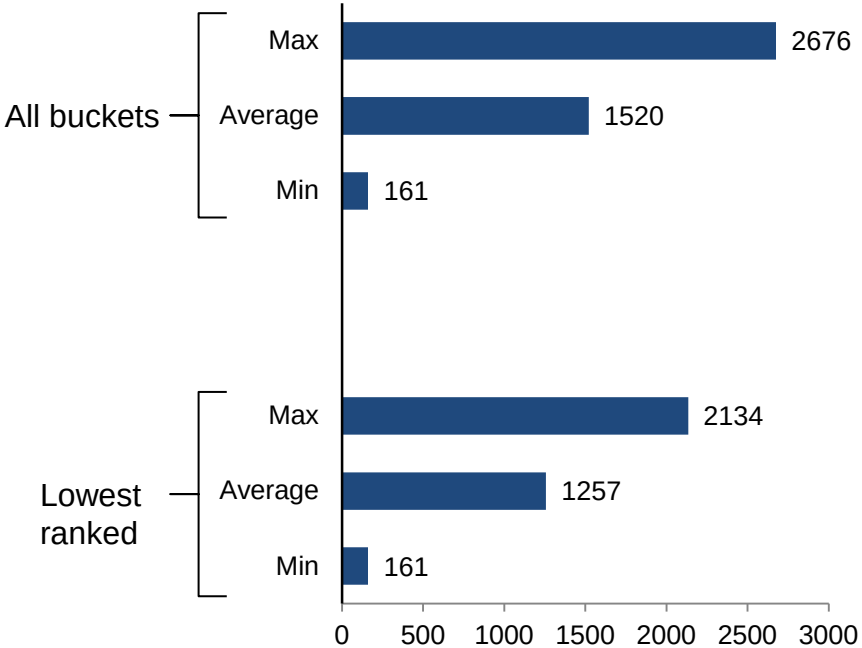
The average bank is 3.9x larger than the average insurer

Total assets (US$ BN, 2010)
Insurers



Sample size = 28

Total assets (US$ BN, 2010)
Banks



Sample size = 28 (all), 14 (bucket 1)

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis
Lowest rank = Bucket 1 of FSB designation, *Update of group of global systemically important banks*, 1 November 2012.

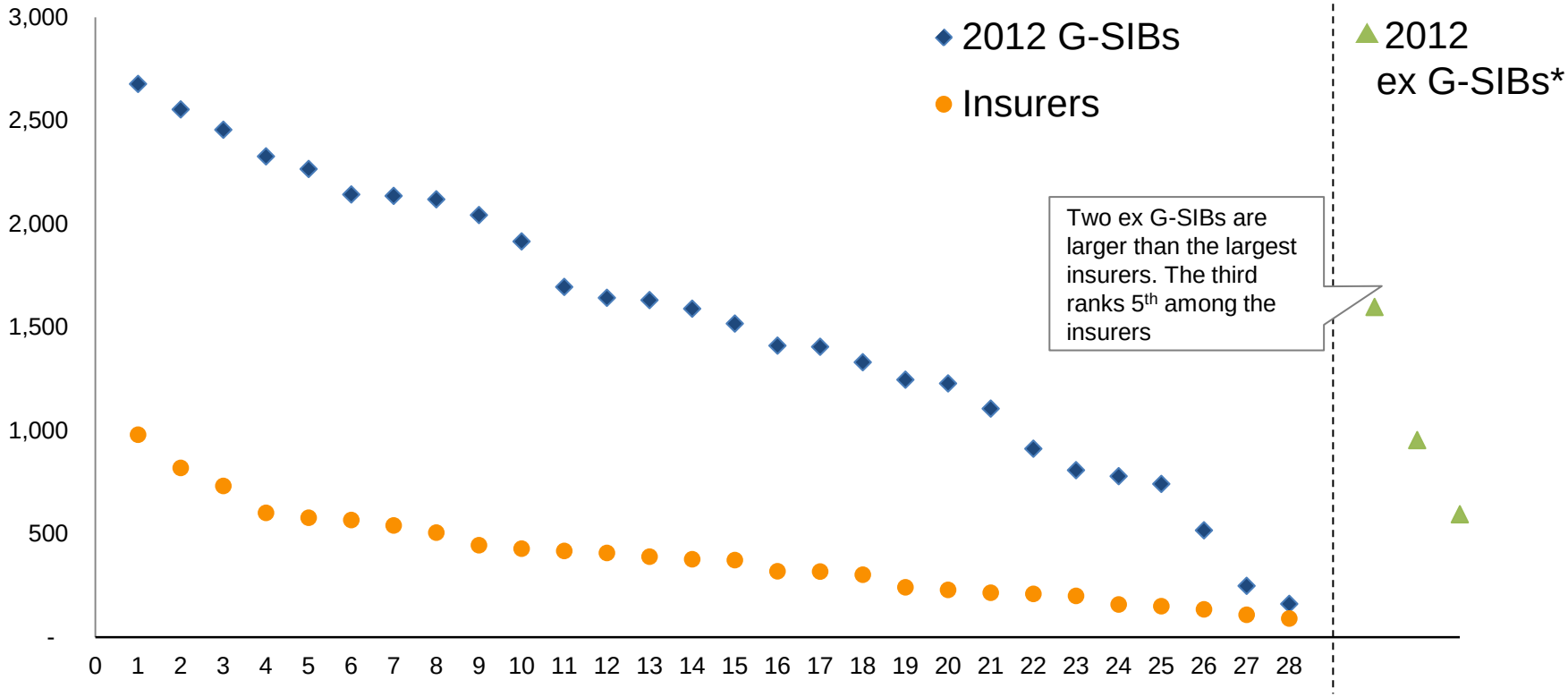
- The lowest ranked banks are 3.2x larger than the average insurers
- Insurance assets are largely matched with long term liabilities
- Note that bank and insurer third party managed assets are not included in the figures above (AUM). Insurance assets include unit linked and separate account assets

Size – Total assets

Largest insurer would rank as 22nd largest G-SIB

Total assets (US$ BN, 2010)

Insurers and Banks



Sample size = 28 (insurers), 28 (banks)

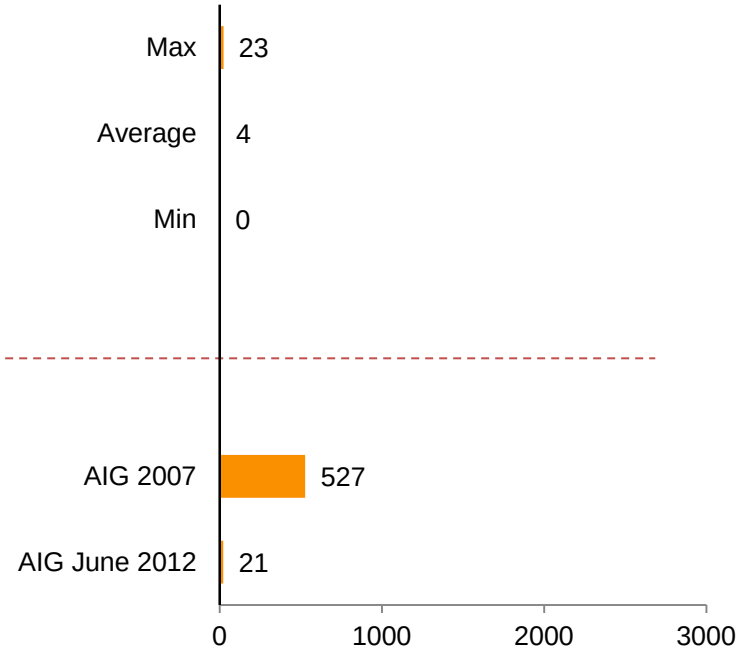
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

NTNIA – Gross Notional Credit Default Swaps (CDS)

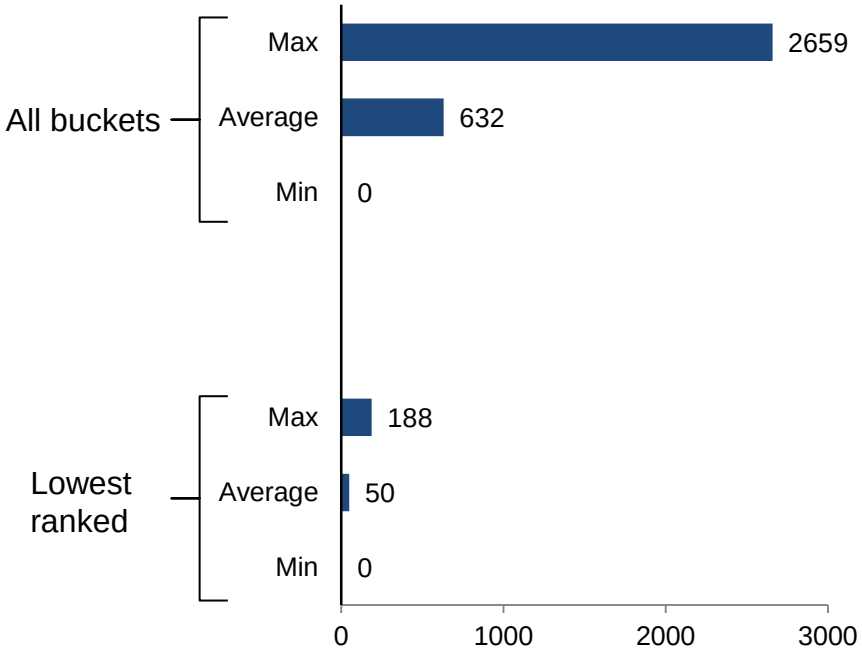
Average bank is 158x the average insurer on CDS sold

Gross notional CDS protection sold
Insurers (US$, BN)



Sample size = 15

Gross notional CDS protection sold
Banks (US$, BN)



Sample size = 19 (all), 10 (bucket 1)

NTNIA = Non Traditional Insurance Activities
This indicator is the NTNIA – Derivatives trading indicator
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

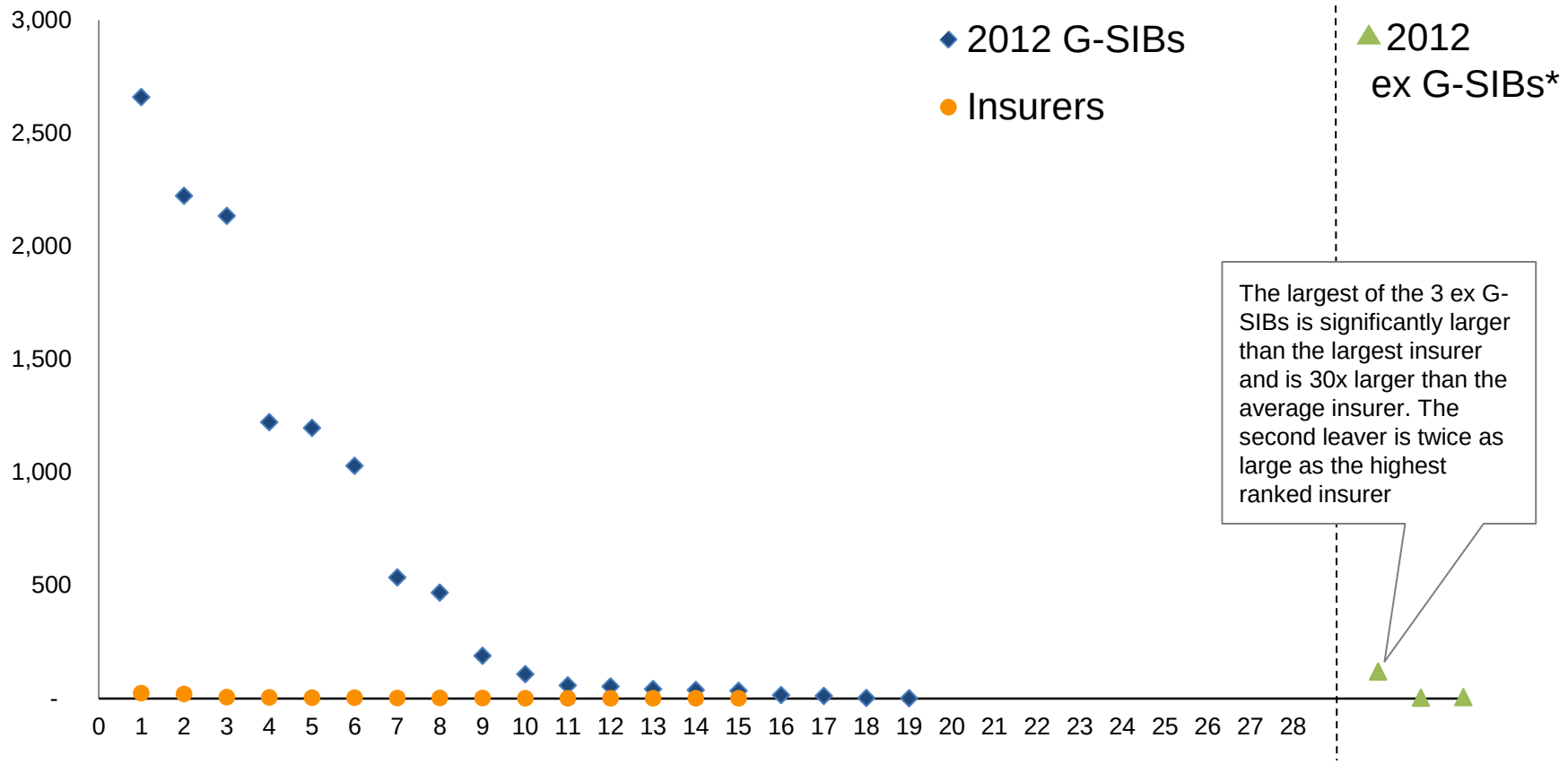
- Insurers write substantially less CDS than banks
- This indicates that the impact of insurers' distress on the buyers of CDS protection is far less than banks
- AIG 2007 reflects the activities of AIG FP before the crisis

NTNIA – Gross Notional Credit Default Swaps (CDS)

The lowest ranked banks have 12.5x the CDS sold by the average insurers

Gross notional CDS protection sold (US$ BN, 2010)

Insurers and Banks



Sample size = 15 (insurers), 19 (banks)

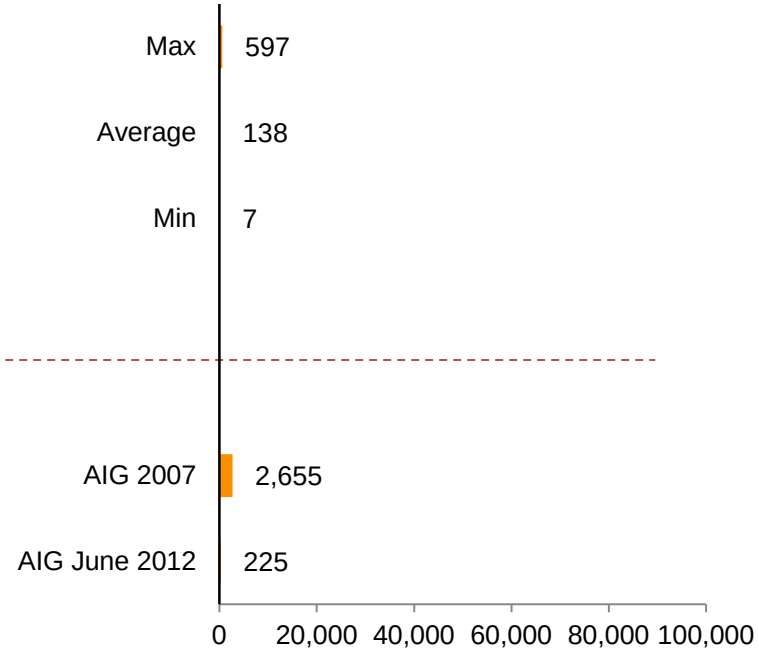
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis
NTNIA = Non Traditional Insurance Activities

* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Interconnectedness – Gross Notional Derivatives

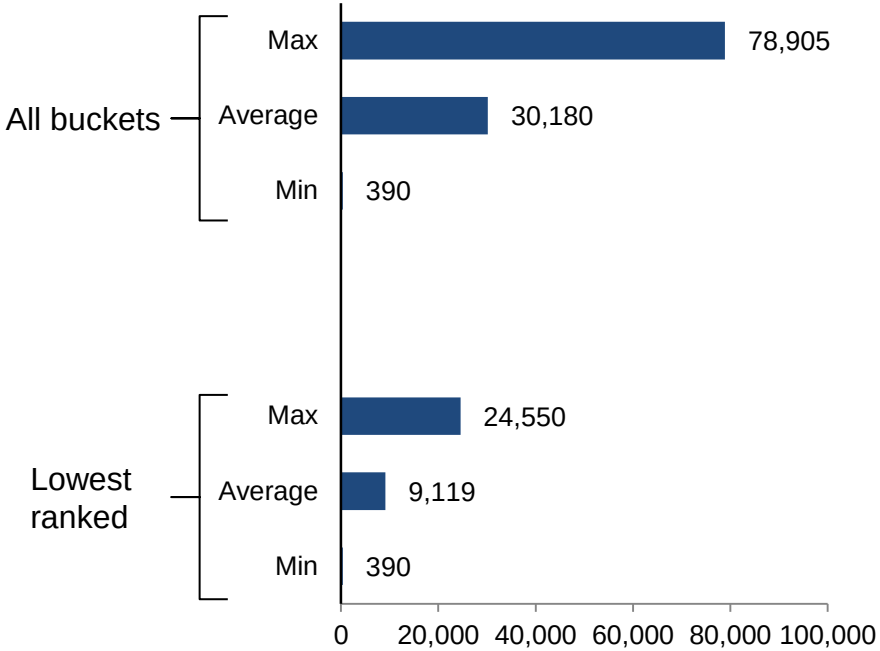
Banks carry 219x the insurer average, even lowest ranked banks are 66x average insurer

Total gross notional value of derivatives (US$ BN, 2010)
Insurers



Sample size = 23

Total gross notional value of derivatives (US$ BN, 2010)
Banks



Sample size = 26 (all), 12 (bucket 1)

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis
Lowest rank = Bucket 1 of FSB designation, *Update of group of global systemically important banks* , 1 November 2012.

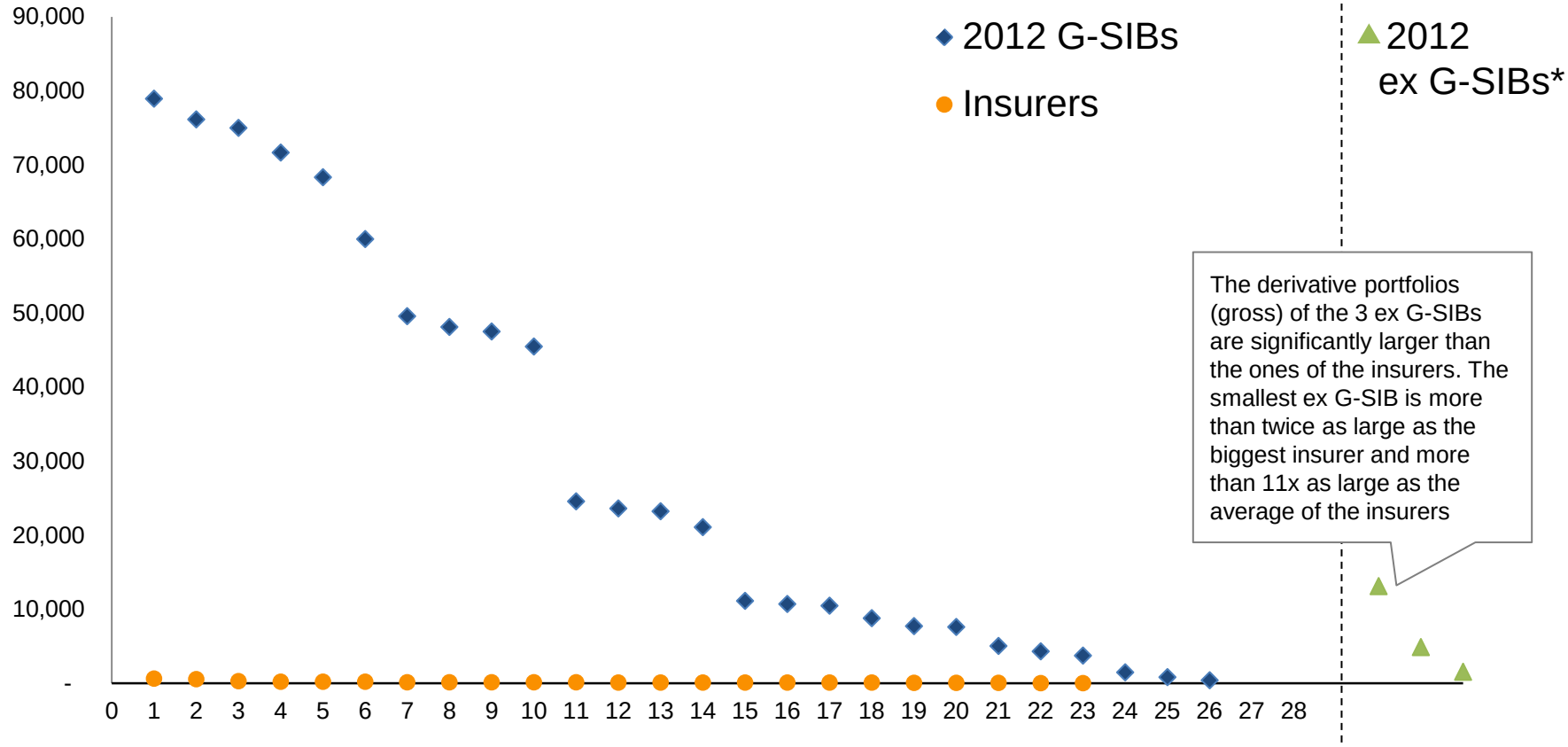
- This indicator is in the IAIS data call
- Demonstrates that insurers engage in far less derivatives transactions than banks

Interconnectedness – Gross Notional Derivatives

The lowest ranked banks carry 66x the amount of derivatives of the average insurer

Total gross notional value of derivatives (US$ BN, 2010)

Insurers and Banks



Sample size = 23 (insurers), 26 (banks)

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

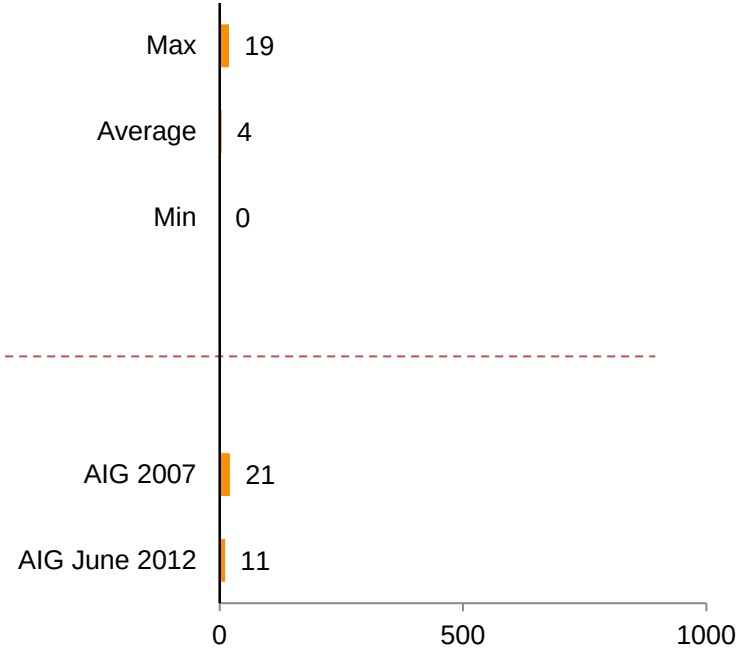
* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Interconnectedness – Gross Negative Derivatives

The average bank owes 68x more than the average insurer, the lowest ranked banks owe 28x the average insurer

Gross negative MTM derivatives exposures (US$ BN, 2010)

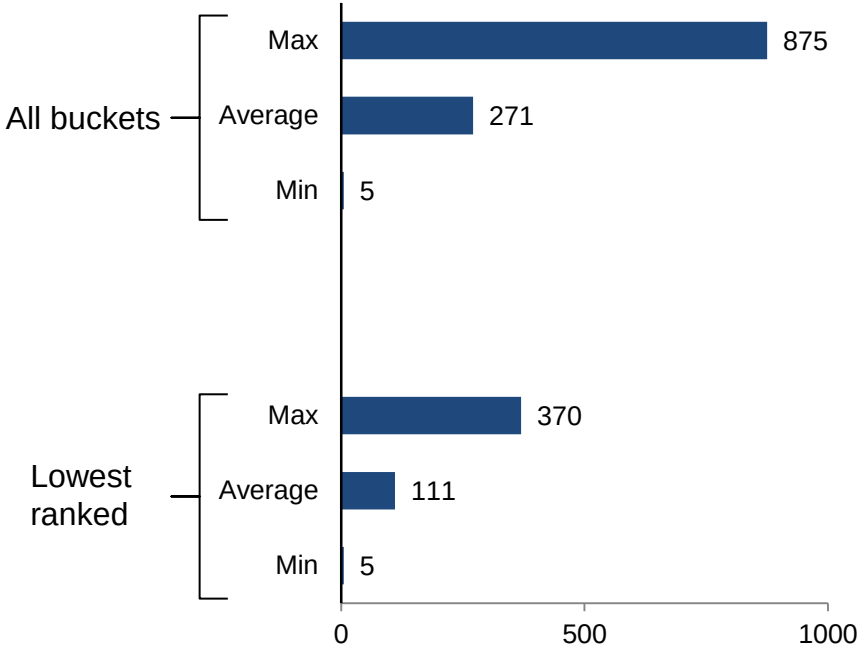
Insurers



Sample size = 27

Gross negative MTM derivatives exposures (US$ BN, 2010)

Banks



Sample size = 25 (all), 11 (bucket 1)

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

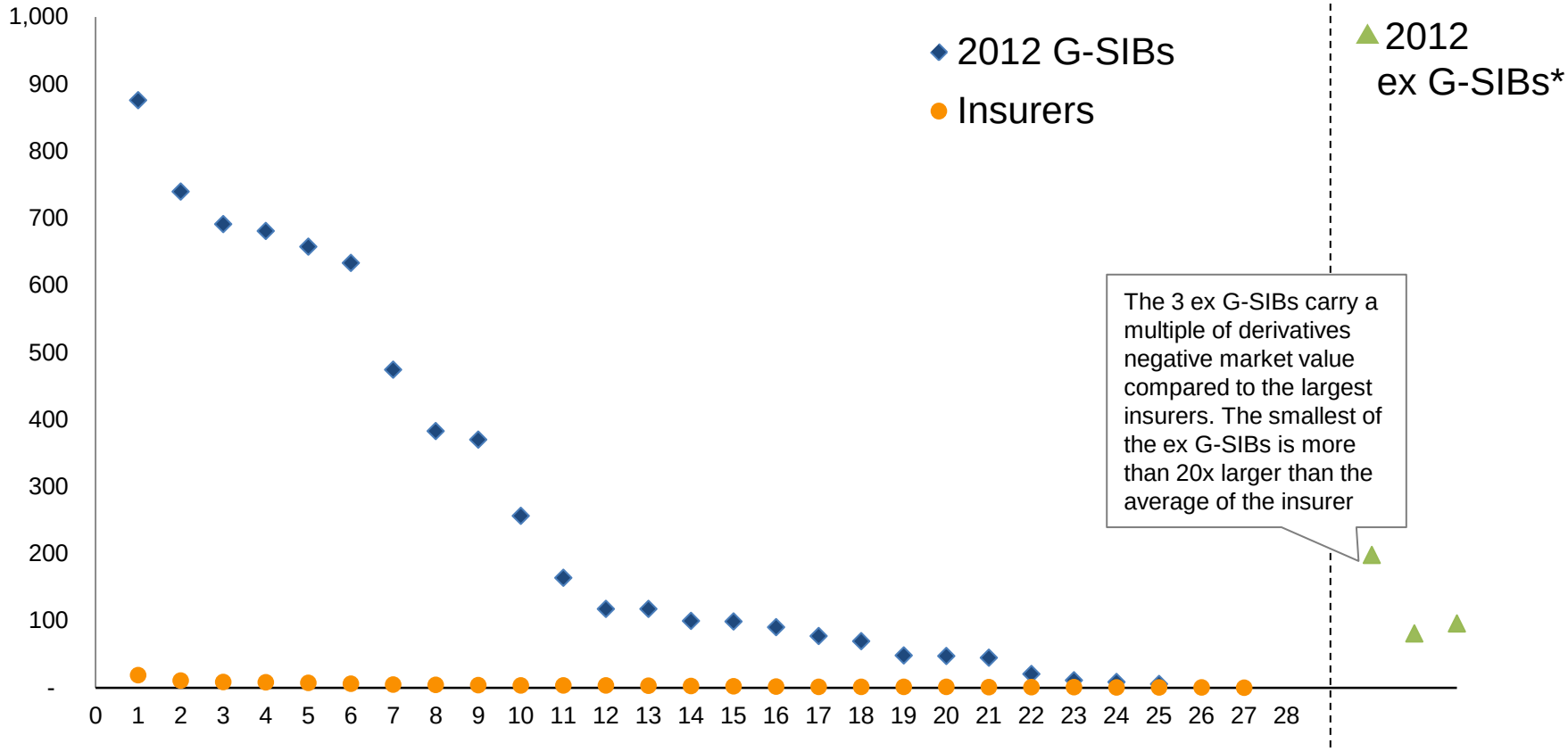
- The figure represents the amount owed to counterparties on derivatives
- The average insurer owes less to derivative counterparties than the lowest ranked banks

Interconnectedness – Gross Negative Derivatives

Insurers are much less interconnected with the financial system through derivatives transactions than banks

Gross negative MTM derivatives exposures (US$ BN, 2010)

Insurers and Banks



Sample size = 27 (insurers), 25 (banks)

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

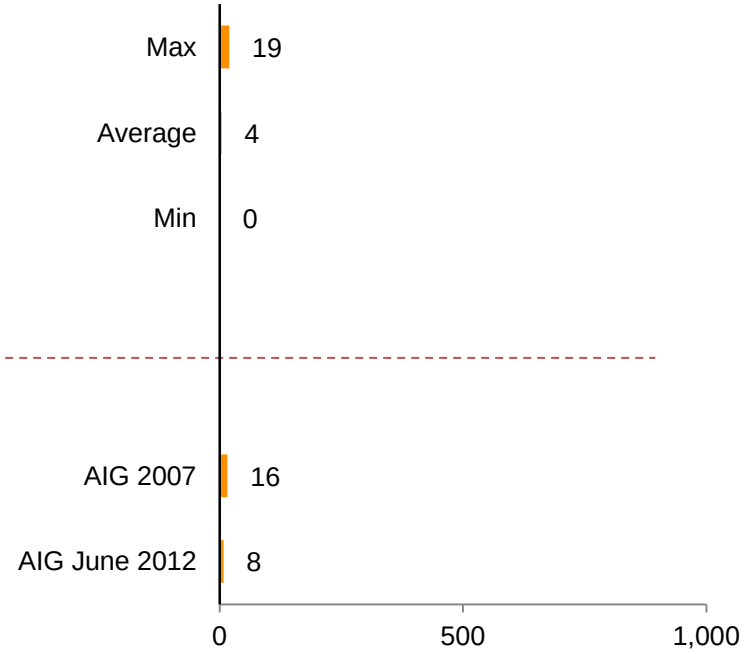
* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Interconnectedness – Gross Positive Derivatives

Average banks are due 70x more than average insurers

Gross positive MTM derivatives exposure with financial institutions[1] (US$ BN, 2010)

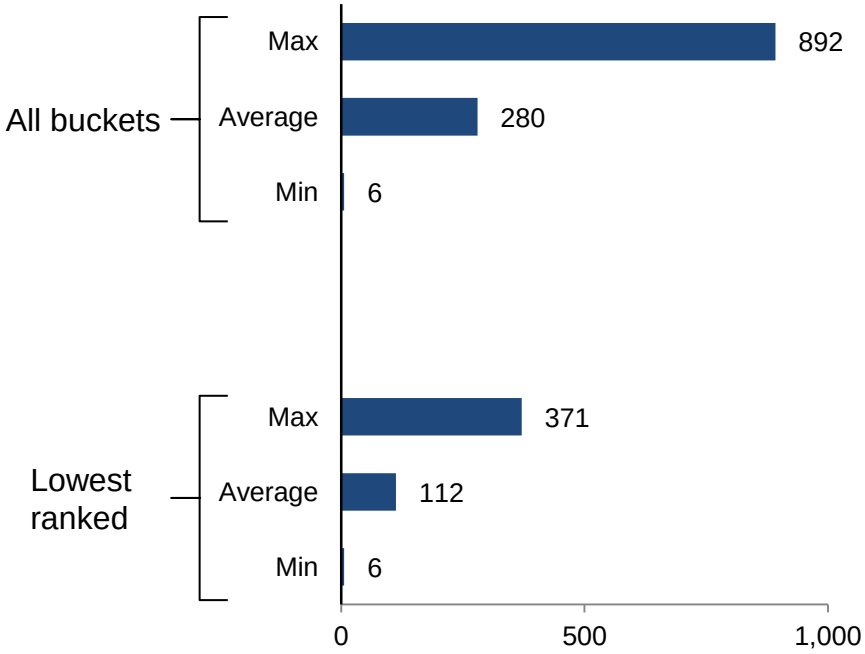
Insurers



Sample size = 27

Gross positive MTM derivatives exposure with financial institutions[1] (US$ BN, 2010)

Banks



Sample size = 25 (all), 11 (bucket 1)

[1] This is the total fair value of gross positive derivative exposure

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

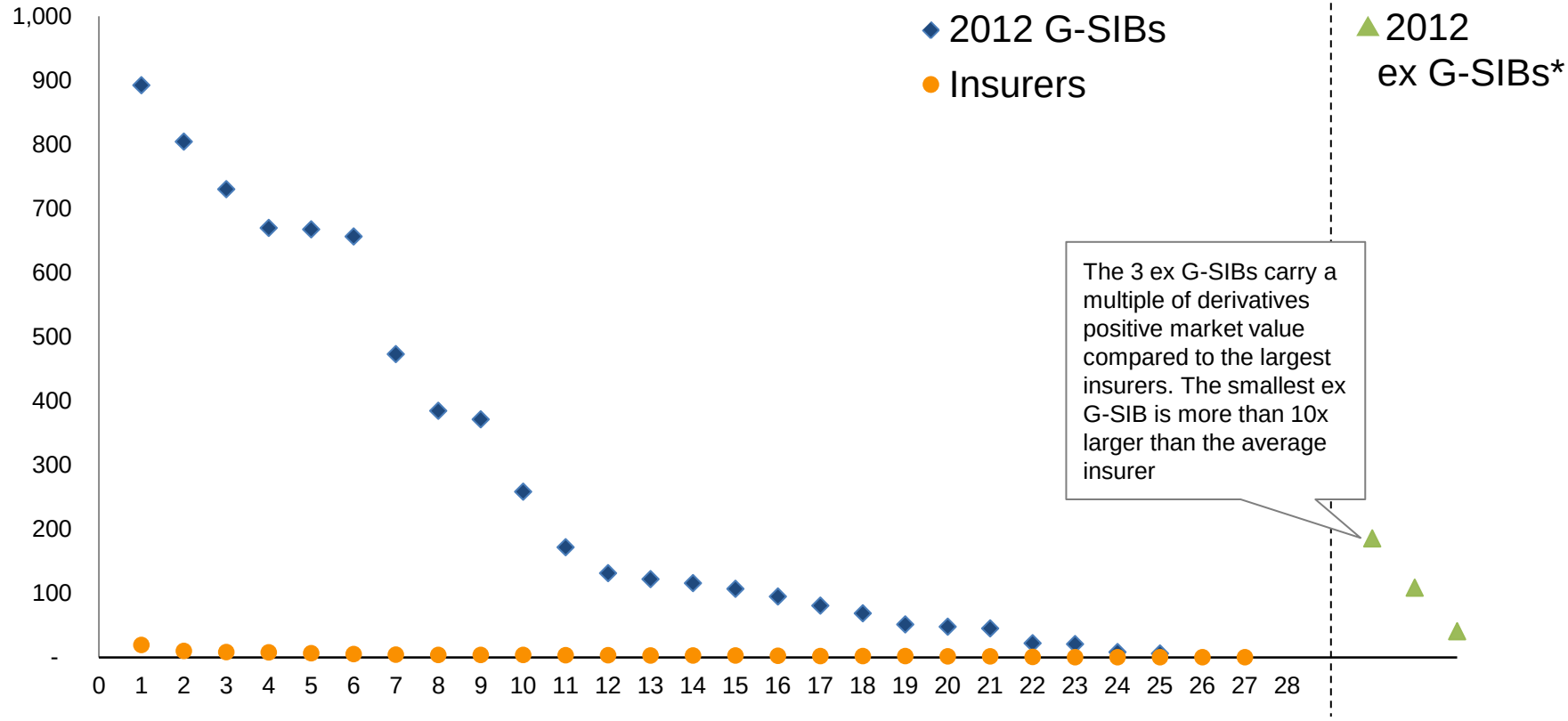
- The lowest ranked banks have 28x more receivables from derivatives counterparties than the average insurer

Interconnectedness – Gross Positive Derivatives

Insurers are much less dependant on performance by derivatives counterparties than banks

Gross positive MTM derivatives exposure with financial institutions[1] (US $ BN, 2010)

Insurers and Banks



Sample size = 27 (insurers), 25 (banks)

[1] This is the total fair value of gross positive derivative exposure

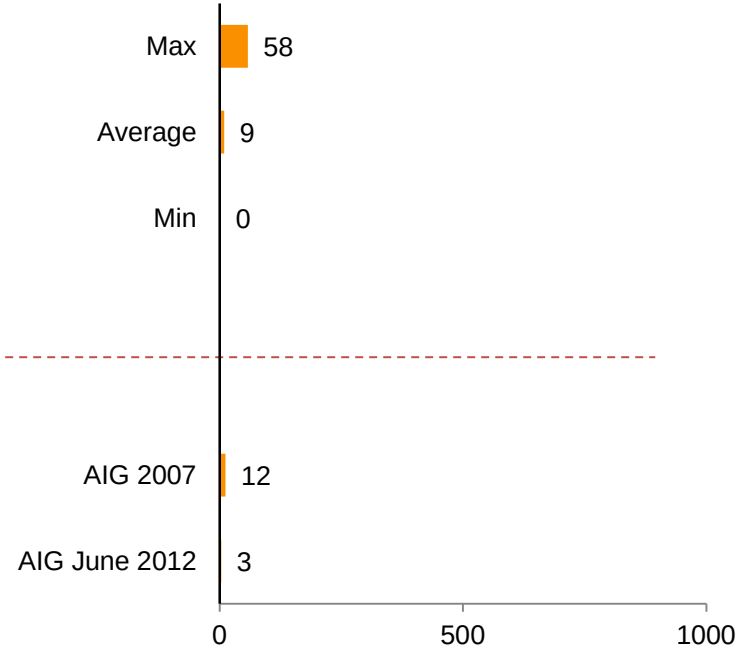
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

NTNIA – Short term funding

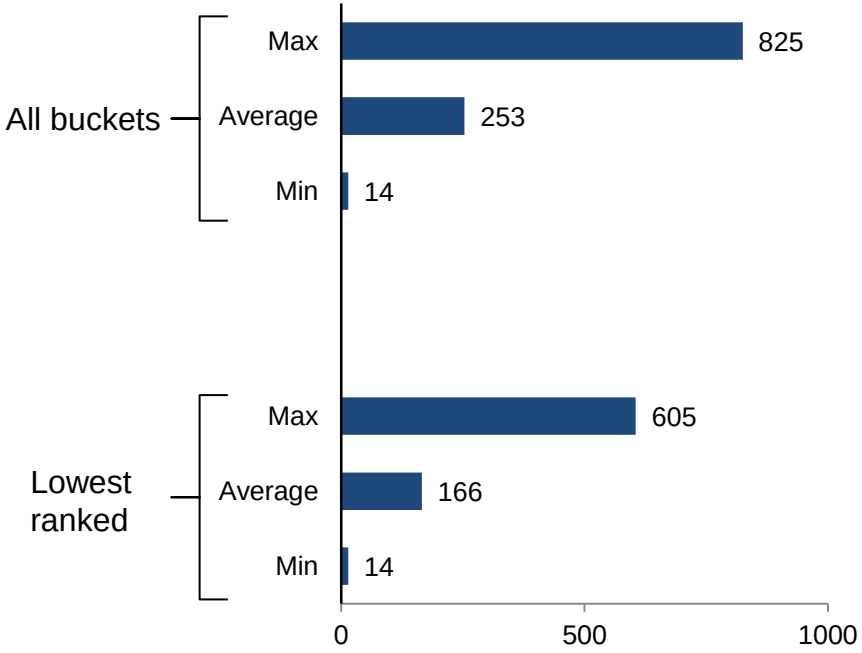
Insurers have significantly lower short term funding compared to banks, even the lowest ranked bank exceeds the average of the insurers

Short term funding (US$ BN, 2010)
Insurers



Sample size = 26

Short term funding (US$ BN, 2010)
Banks



Sample size = 28 (all), 14 (bucket 1)

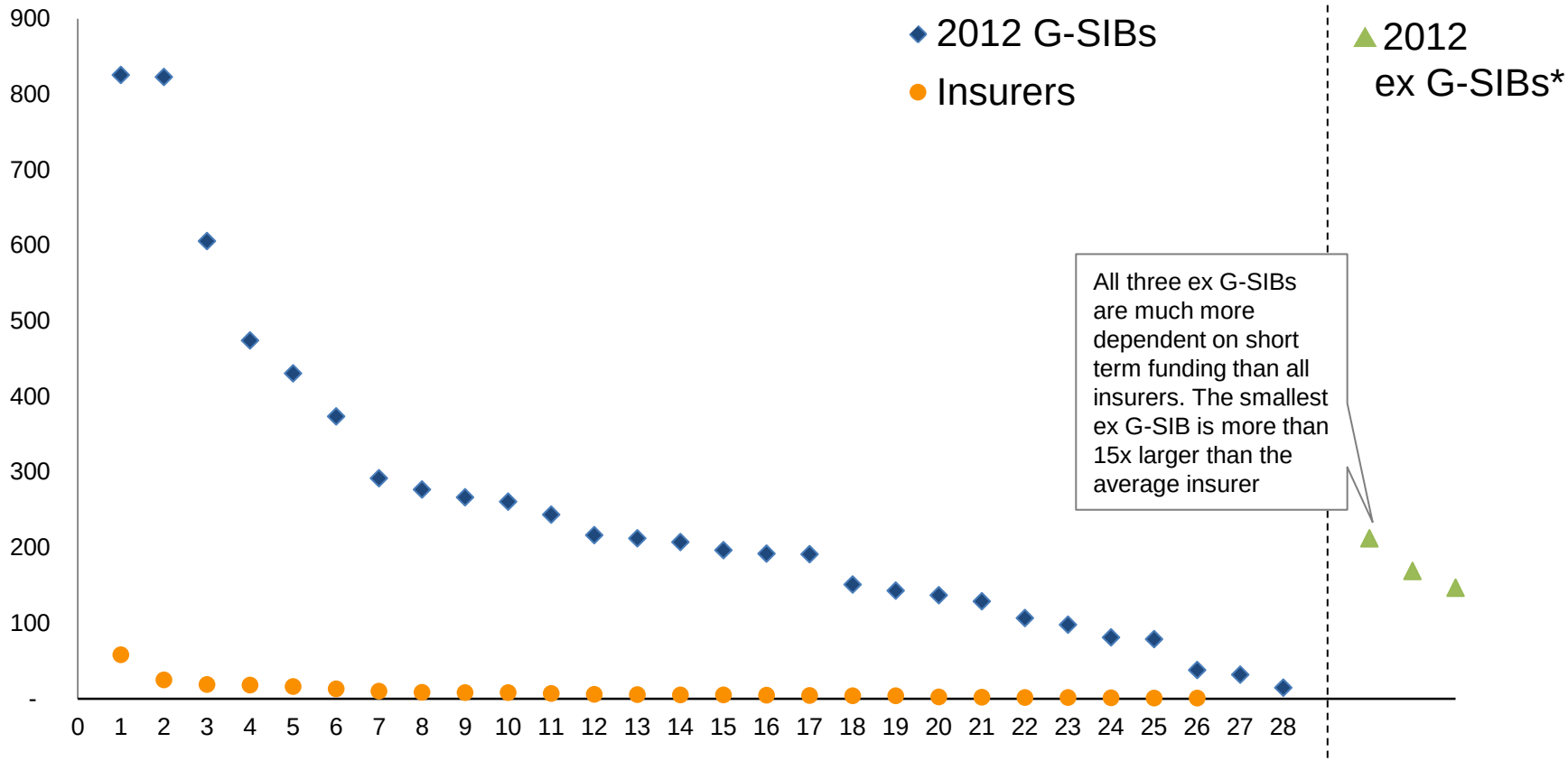
Short term funding is the absolute sum of short term borrowing, commercial paper issued, certificates of deposit issued, gross value of repos and gross value of securities lent
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

NTNIA – Short term funding

Insurers are not involved in maturity transformation due to the insurance business model

Short term funding (US$ BN, 2010)

Insurers and Banks



Sample size = 26 (insurers), 28 (banks)

Short term funding is the absolute sum of short term borrowing, commercial paper issued, certificates of deposit issued, gross value of repos and gross value of securities lent

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

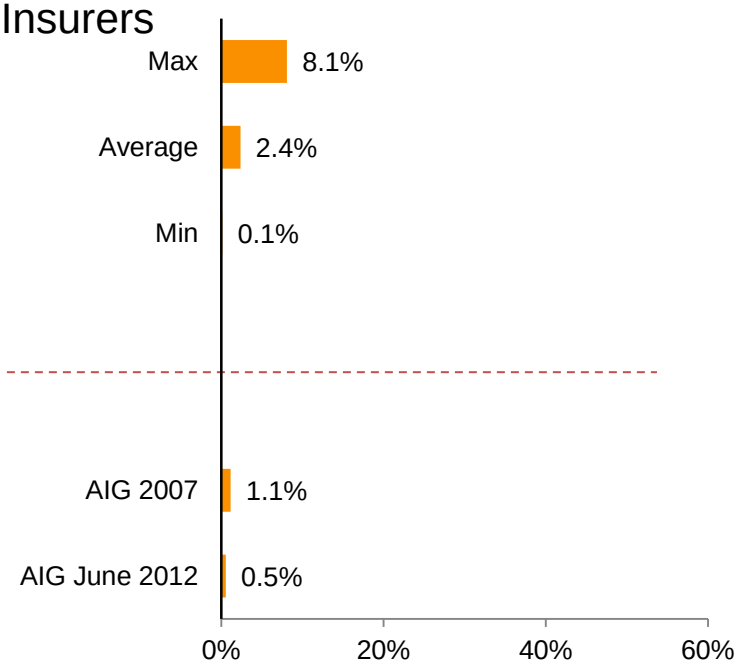
* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

NTNIA – Short term funding percentage

Insurers' short term funding are significantly lower percentages of their overall balance sheet, even compared to the lowest ranked banks

Short term funding as percentage of Total assets

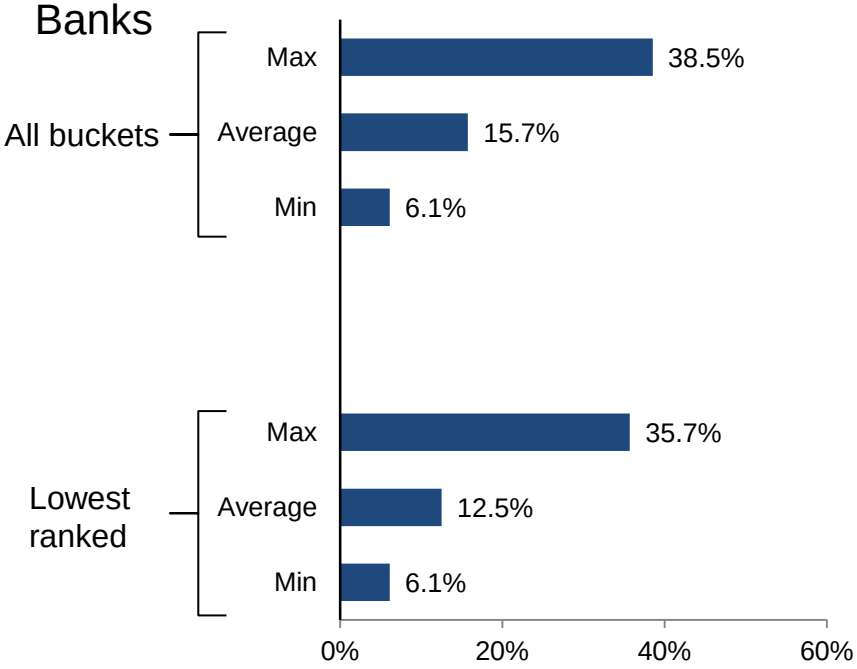
Insurers



Sample size = 26

Short term funding as percentage of Total assets

Banks



Sample size = 28 (all), 14 (bucket 1)

Short term funding is the absolute sum of short term borrowing, commercial paper issued, certificates of deposit issued, gross value of repos and gross value of securities lent
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

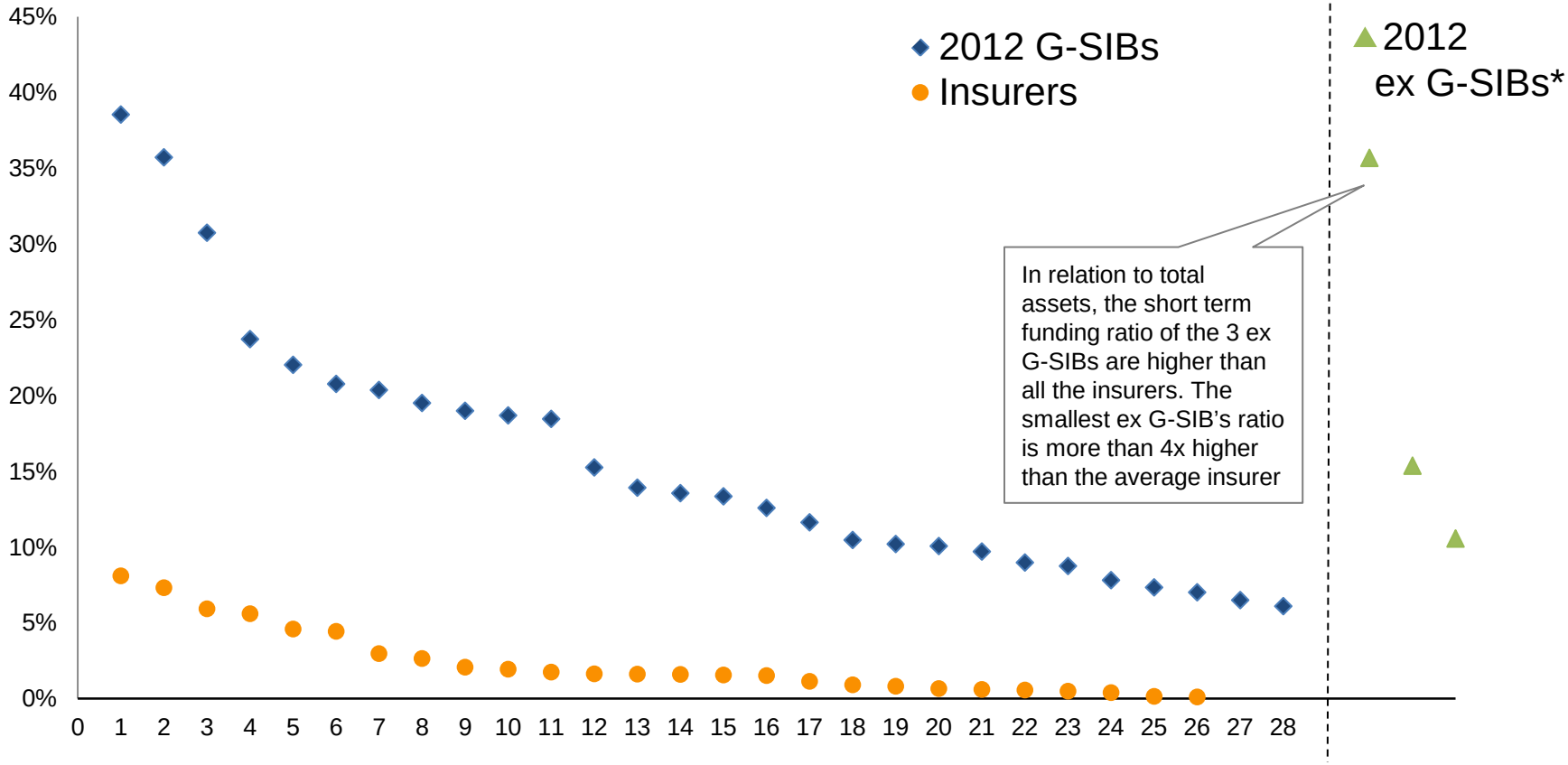
- Insurers are not involved in maturity transformation due to the insurance business model

NTNIA – Short term funding percentage

Insurers are not expected to be forced into damaging fire sales activities due to their limited short term funding activities

Short term funding as percentage of assets

Insurers and Banks



Sample size = 26 (insurers), 28 (banks)

Short term funding is the absolute sum of short term borrowing, commercial paper issued, certificates of deposit issued, gross value of repos and gross value of securities lent

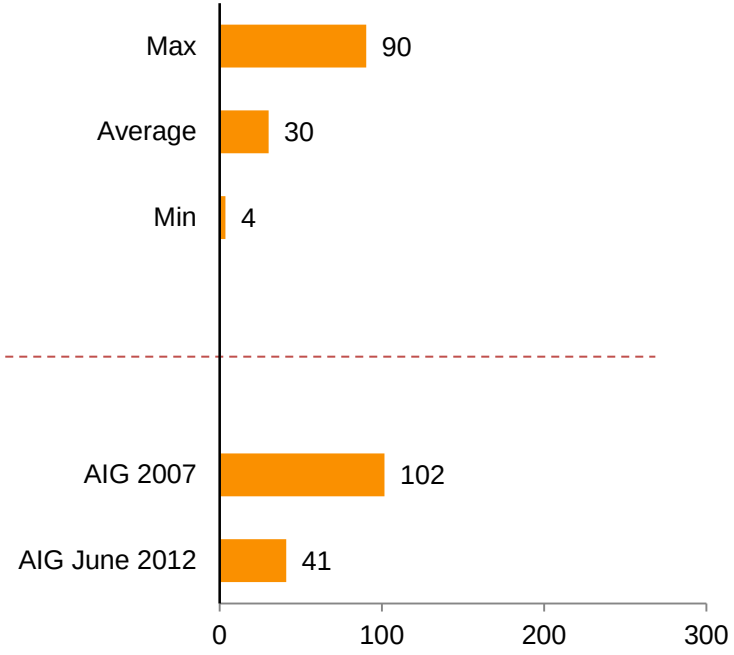
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Interconnectedness – Intra-financial assets

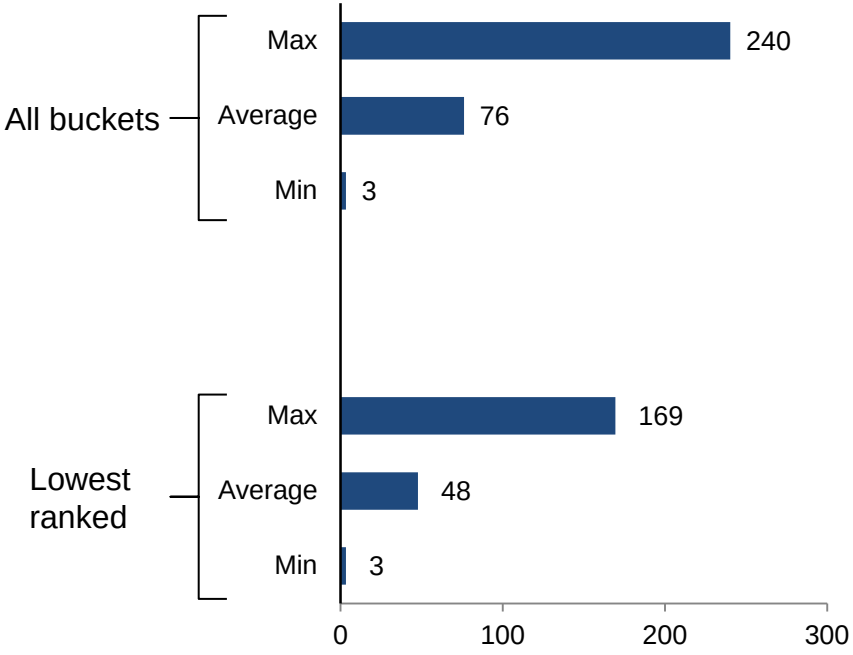
The average bank is 2.5x larger than the average insurer

Intra-financial assets (US$ BN, 2010)
Insurers



Sample size = 22

Intra-financial assets (US$ BN, 2010)
Banks



Sample size = 25 (all), 12 (bucket 1)

Intra-financial assets are the sum of lending to FIs and holding of securities (debt securities, commercial paper, certificates of deposit and equity) issued by FIs. Intra-financial liabilities do not include bank deposits

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

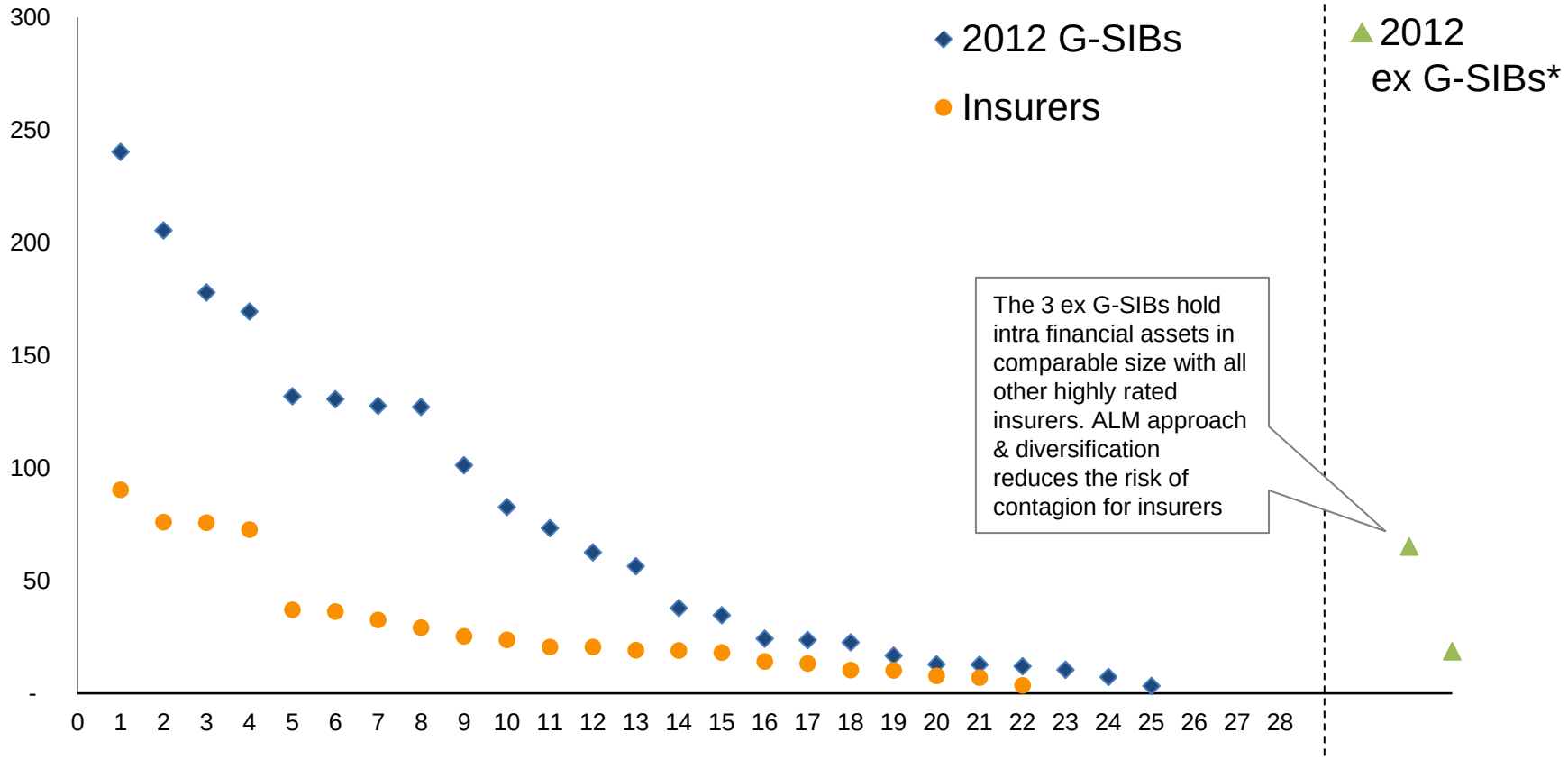
- As large long term investors, insurers invest in assets such as fixed income securities and equities following a liability driven investment approach – supporting the financial system and the economy
- A failure of an insurer will not trigger an immediate need to sell assets due to the long-term nature of the liabilities and the liability driven investment approach

Interconnectedness – Intra-financial assets

The impact on insurers of a failure of a financial investee is likely to be partly absorbed through product structures where the loss is shared with policyholders.

Intra-financial assets (US$ BN, 2010)

Insurers and Banks



Sample size = 28 (insurers), 28 (banks)

Intra-financial assets are the sum of lending to FIs and holding of securities (debt securities, commercial paper, certificates of deposit and equity) issued by FIs. Intra-financial liabilities do not include bank deposits

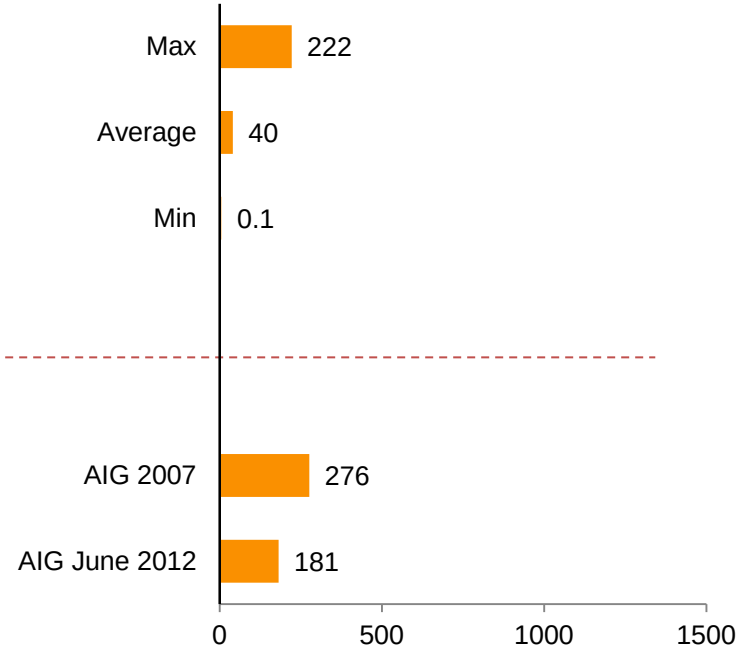
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Interconnectedness – Intra-financial liabilities

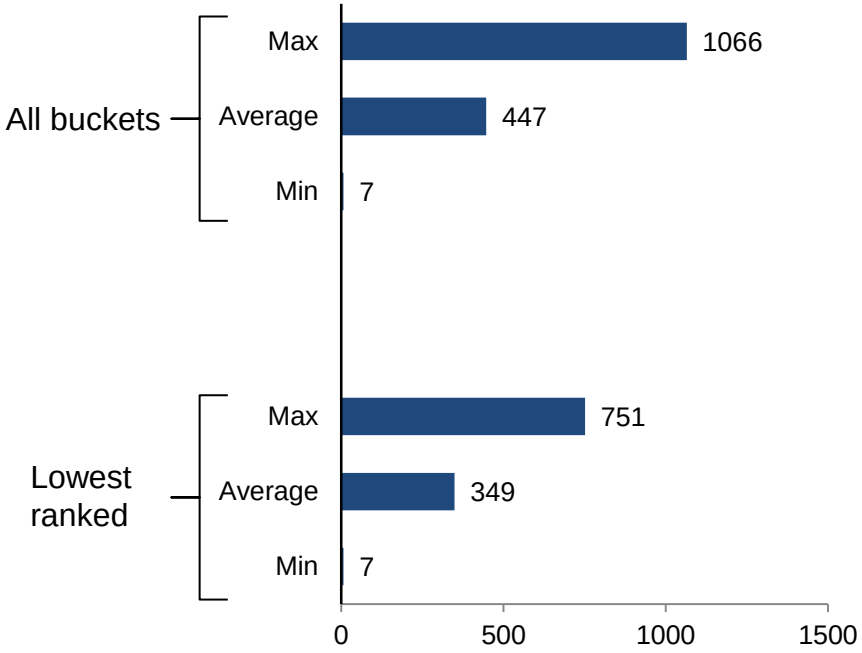
The average bank is 11x larger than the average insurer

Intra-financial liabilities (US$ BN, 2010)
Insurers



Sample size = 28

Intra-financial liabilities (US$ BN, 2010)
Banks



Sample size = 28 (all), 14 (bucket 1)

Intra-financial liabilities are the sum of borrowings from FIs and issuance of securities (debt securities, commercial paper, certificates of deposit and equity) owned by other FIs. Intra-financial liabilities do not include bank deposits

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

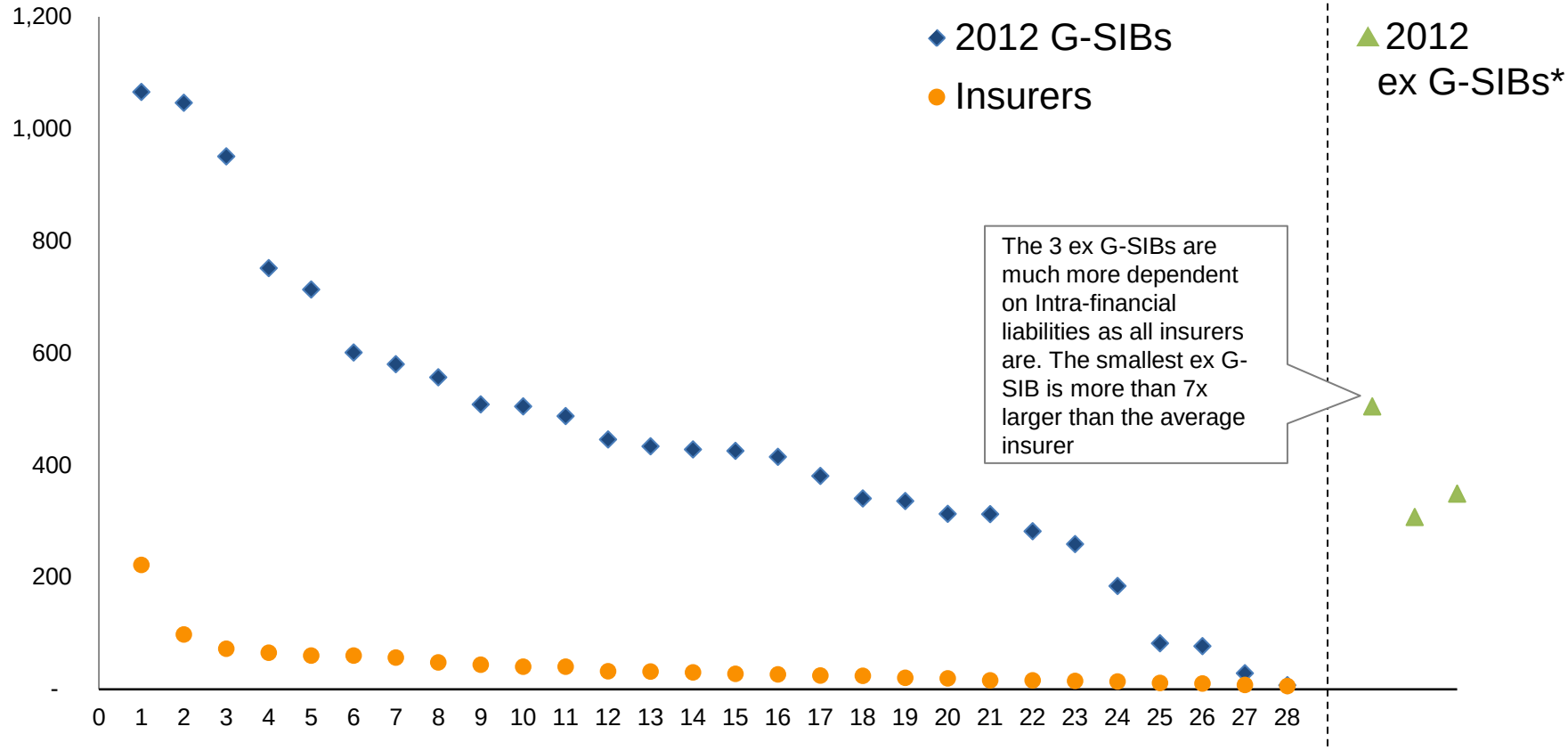
- The failure of an insurer has a significantly lower impact to the financial industry than the failure of a bank

Interconnectedness – Intra-financial liabilities

Insurers depend much less on borrowings and issuance of securities for funding than banks

Intra-financial liabilities (US$ BN, 2010)

Insurers and Banks



Sample size = 28 (insurers), 28 (banks)

Intra-financial liabilities are the sum of borrowings from FIs and issuance of securities (debt securities, commercial paper, certificates of deposit and equity) owned by other FIs. Intra-financial liabilities do not include bank deposits

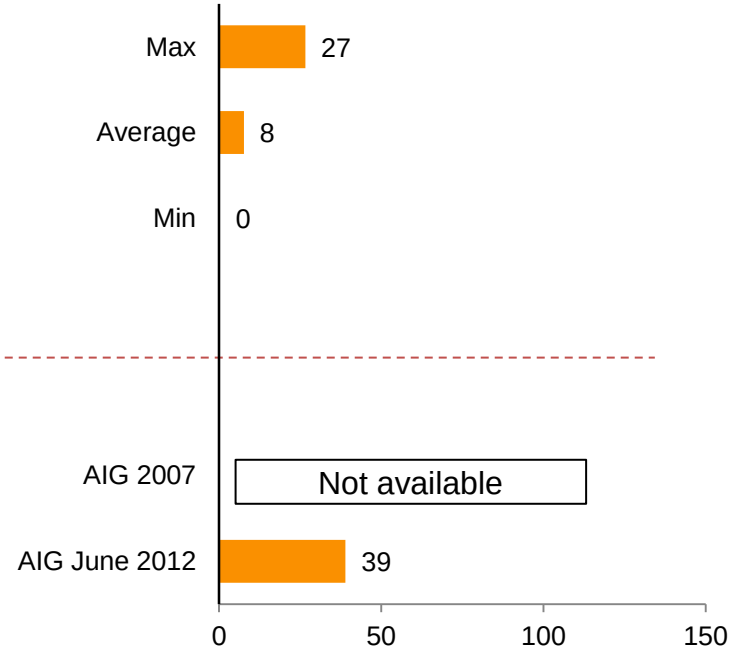
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Interconnectedness – Level 3 assets

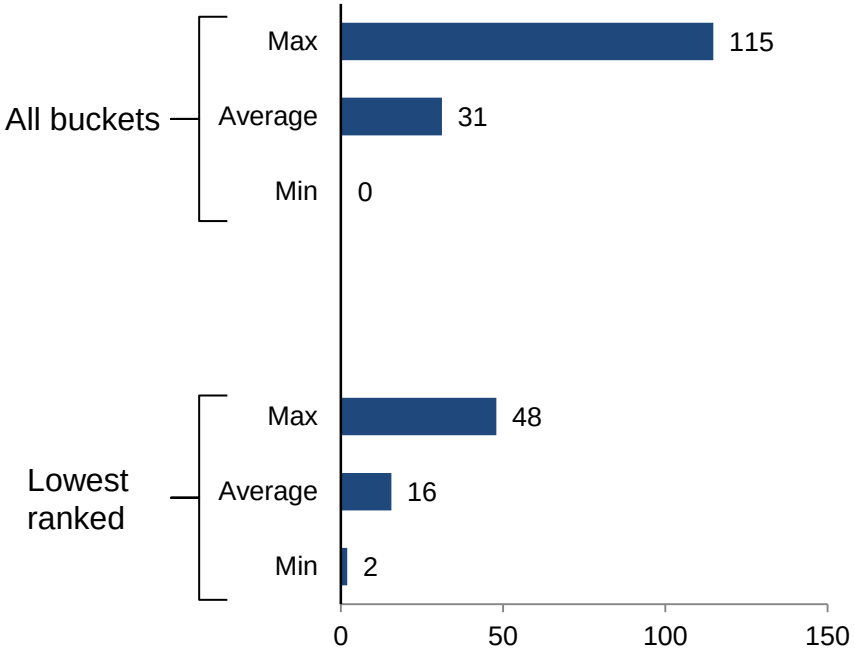
The average bank is 4x larger than the average insurer

Total level 3 assets[1] (US $ BN, 2010)
Insurers



Sample size = 27

Total level 3 assets[1] (US $ BN, 2010)
Banks



Sample size = 28 (all), 14 (bucket 1)

[1] Assets whose fair value cannot be determined by using observable measures, such as market prices or models. Level 3 assets are classified as the least liquid assets.
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

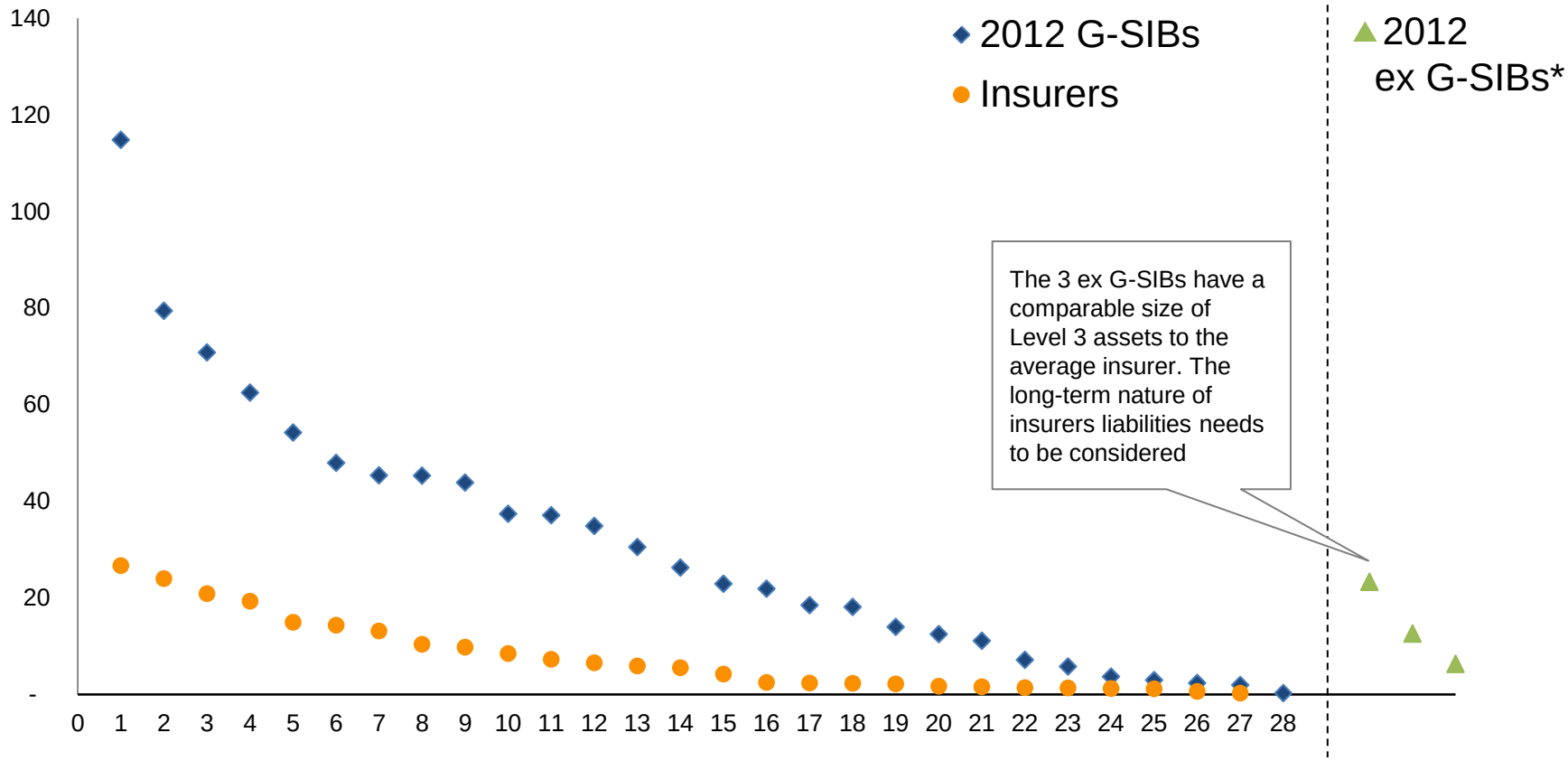
- Insurers' holdings of level 3 assets are considerably less than banks' holdings – even the average lowest ranked bank is 2x the average insurer
- As large long term institutional investors, insurers invest in illiquid assets following a liability driven investment approach

Interconnectedness – Level 3 assets

A failure of an insurer will not trigger an immediate need to sell assets due to the long-term nature of the liabilities

Total level 3 assets[1] (US $ BN, 2010)

Insurers and Banks



Sample size = 27 (insurers), 28 (banks)

[1] Assets whose fair value cannot be determined by using observable measures, such as market prices or models

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

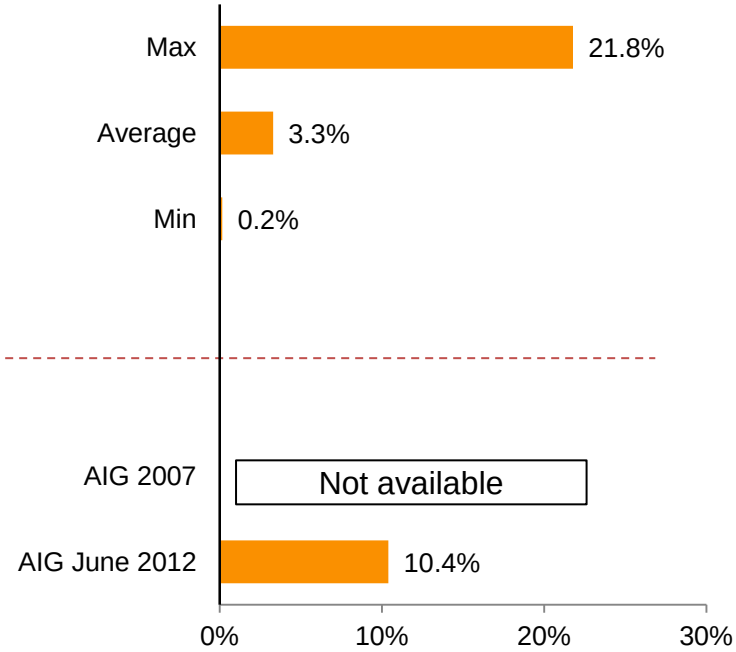
* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Interconnectedness – Level 3 assets percentage

The average insurer carries a lower percentage of Level 3 assets than banks

Total level 3 asset as percentage of Total level 1 + 2 + 3 assets

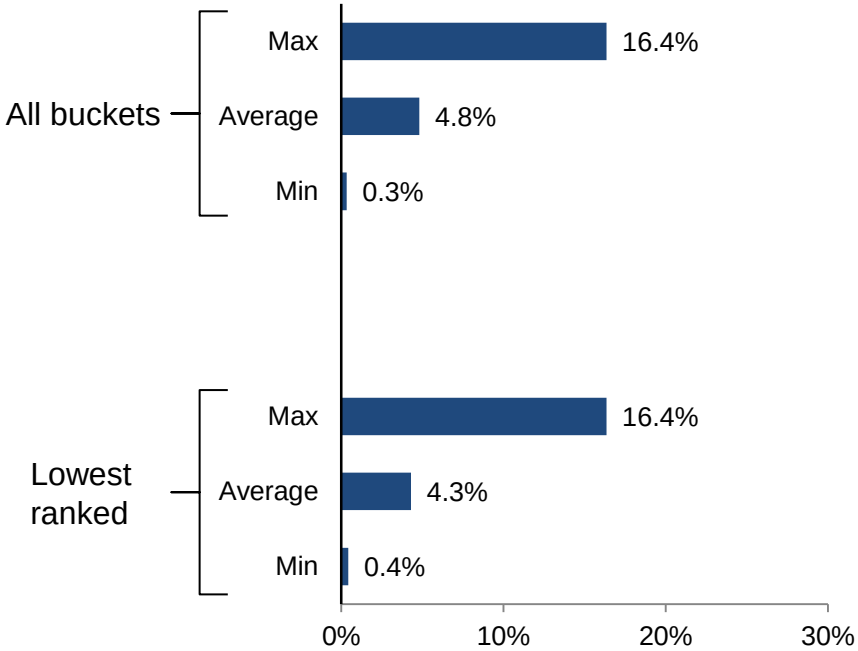
Insurers



Sample size = 26

Total level 3 asset as percentage of Total level 1 + 2 + 3 assets

Banks



Sample size = 25 (all), 12 (bucket 1)

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

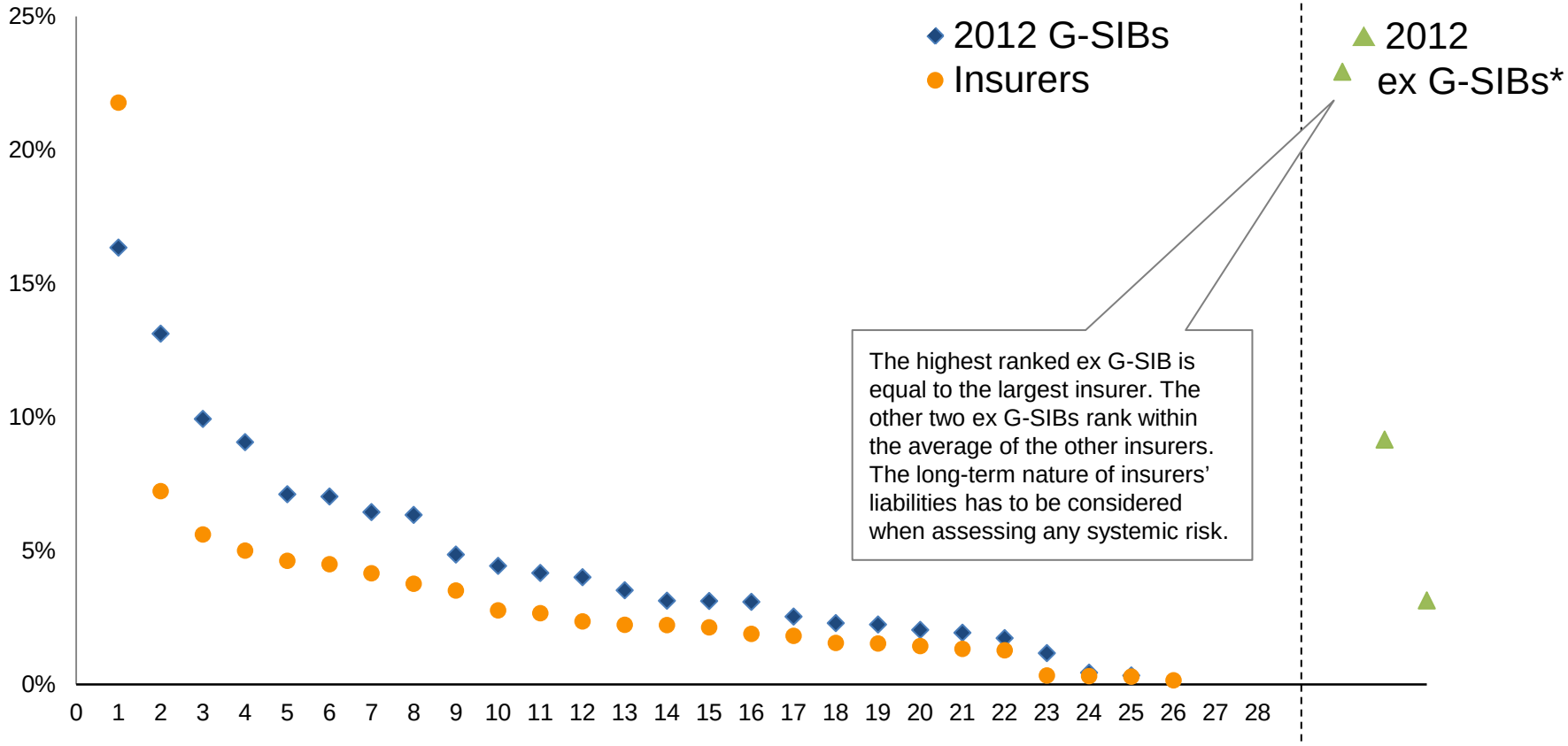
- Insurers asset liability matching means that Level 3 assets are an appropriate match for their liabilities.

Interconnectedness – Level 3 assets percentage

Given the long term nature of insurer liabilities, one would expect a higher percentage of Level 3 assets than banks

Total level 3 asset as percentage of Total level 1 + 2 + 3 assets (US$ BN, 2010)

Insurers and Banks



Sample size = 26 (insurers), 25 (banks)

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

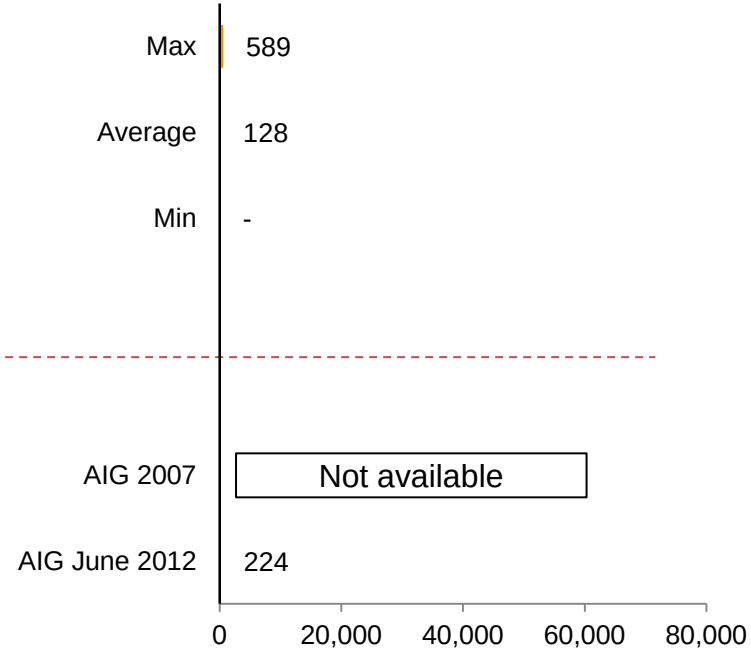
Appendix

Additional data items from the IAIS data calls

Interconnectedness – Total gross notional value of non-hedging derivatives[1]

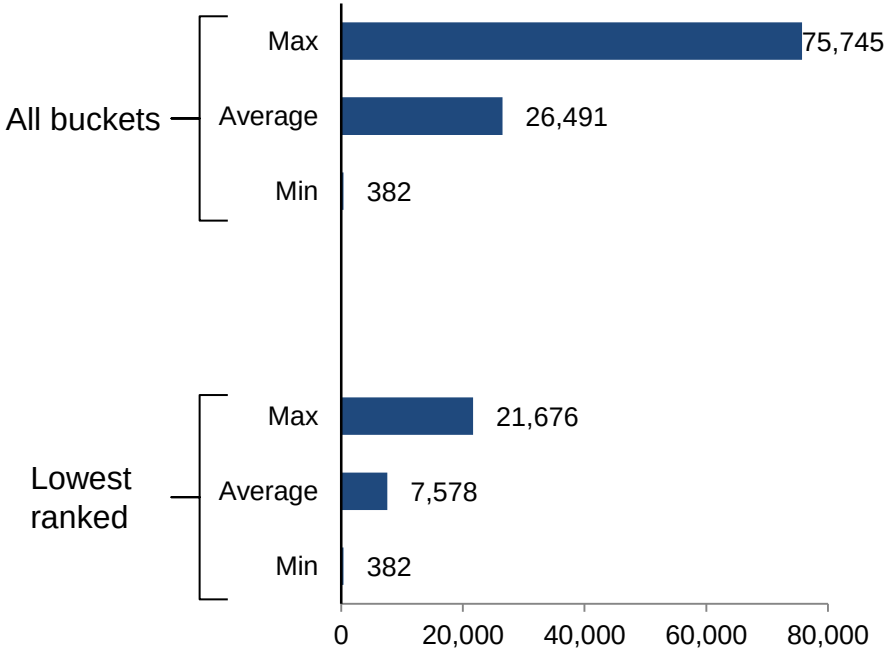
Banks carry 207x the insurer average

Total gross notional value of non-hedging derivatives (US$ BN, 2010)
Insurers



Sample size = 18

Total gross notional value of non-hedging derivatives (US$ BN, 2010)
Banks



Sample size = 16 (all), 7 (bucket 1)

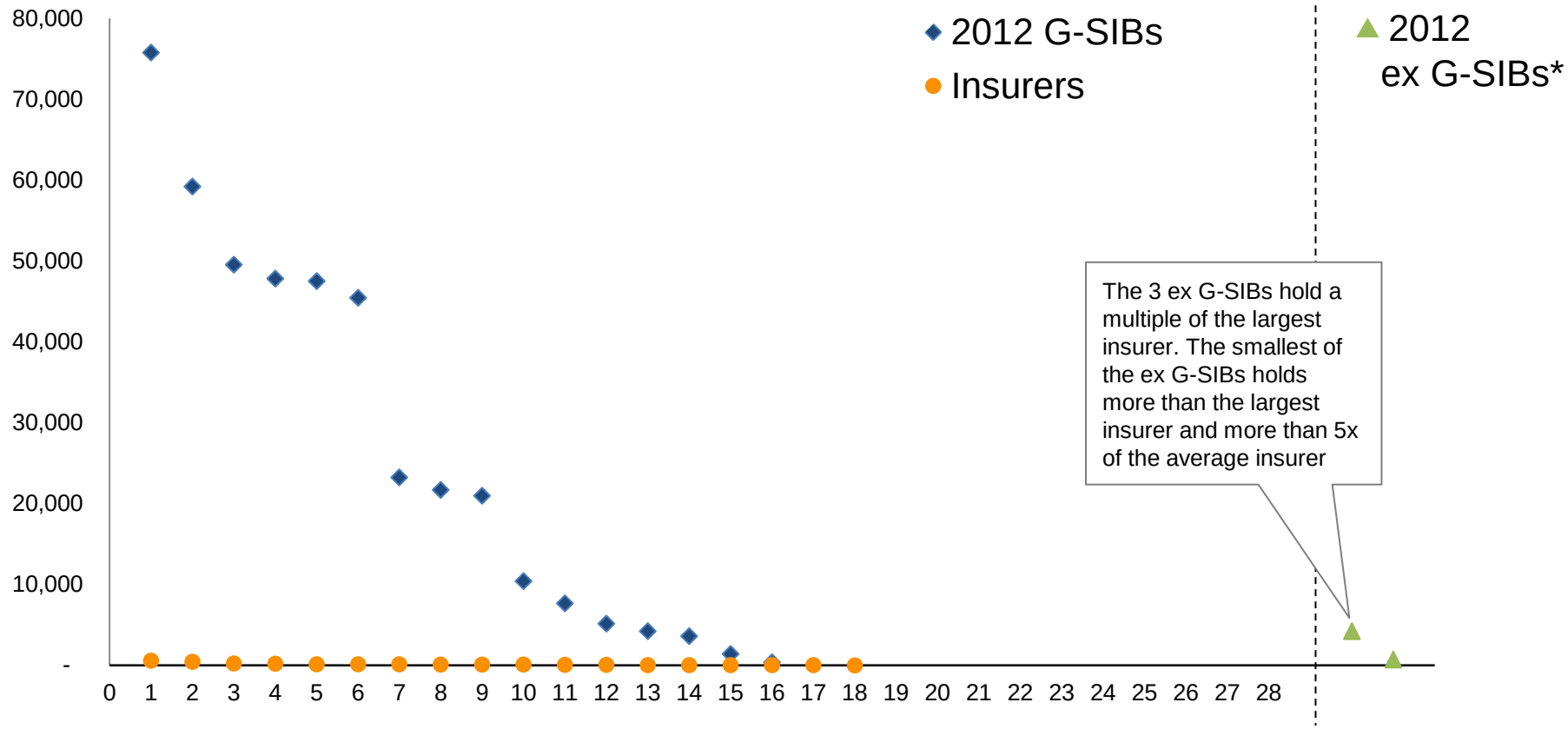
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis
1 Non-hedging as defined in the context of general purpose accounting standards

Interconnectedness – Total gross notional value of non-hedging derivatives[1]

The lowest ranked banks carry 59x the average insurer

Total gross notional value of non-hedging derivatives (US$ BN, 2010)

Insurers and Banks



Sample size = 18 (insurers), 16 (banks)

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

1 Non-hedging as defined in the context of general purpose accounting standards

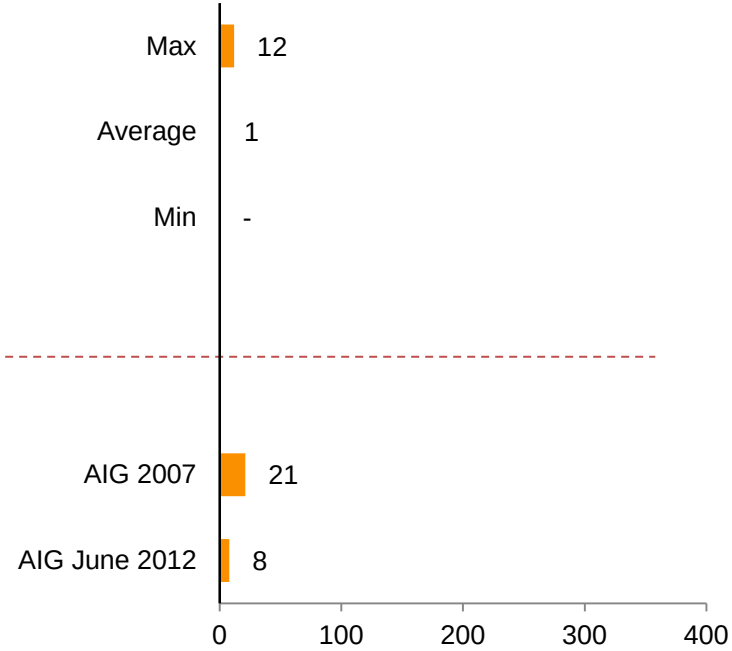
* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Interconnectedness – Net Positive Reverse Repo

The average bank is 128x larger than the average insurer

Net Positive Reverse Repo (US$ BN, 2010)

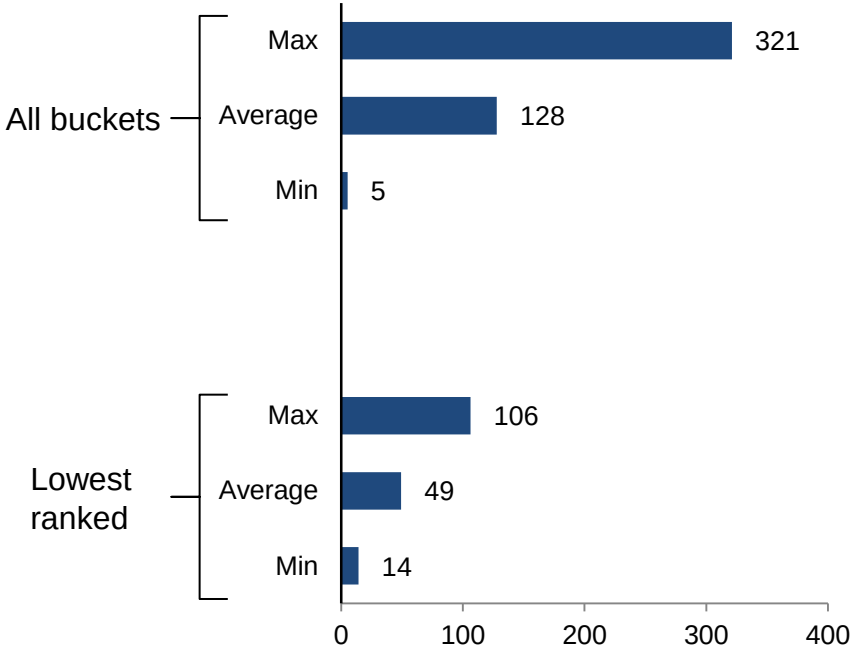
Insurers



Sample size = 15

Net Positive Reverse Repo (US$ BN, 2010)

Banks



Sample size = 23 (all), 9 (bucket 1)

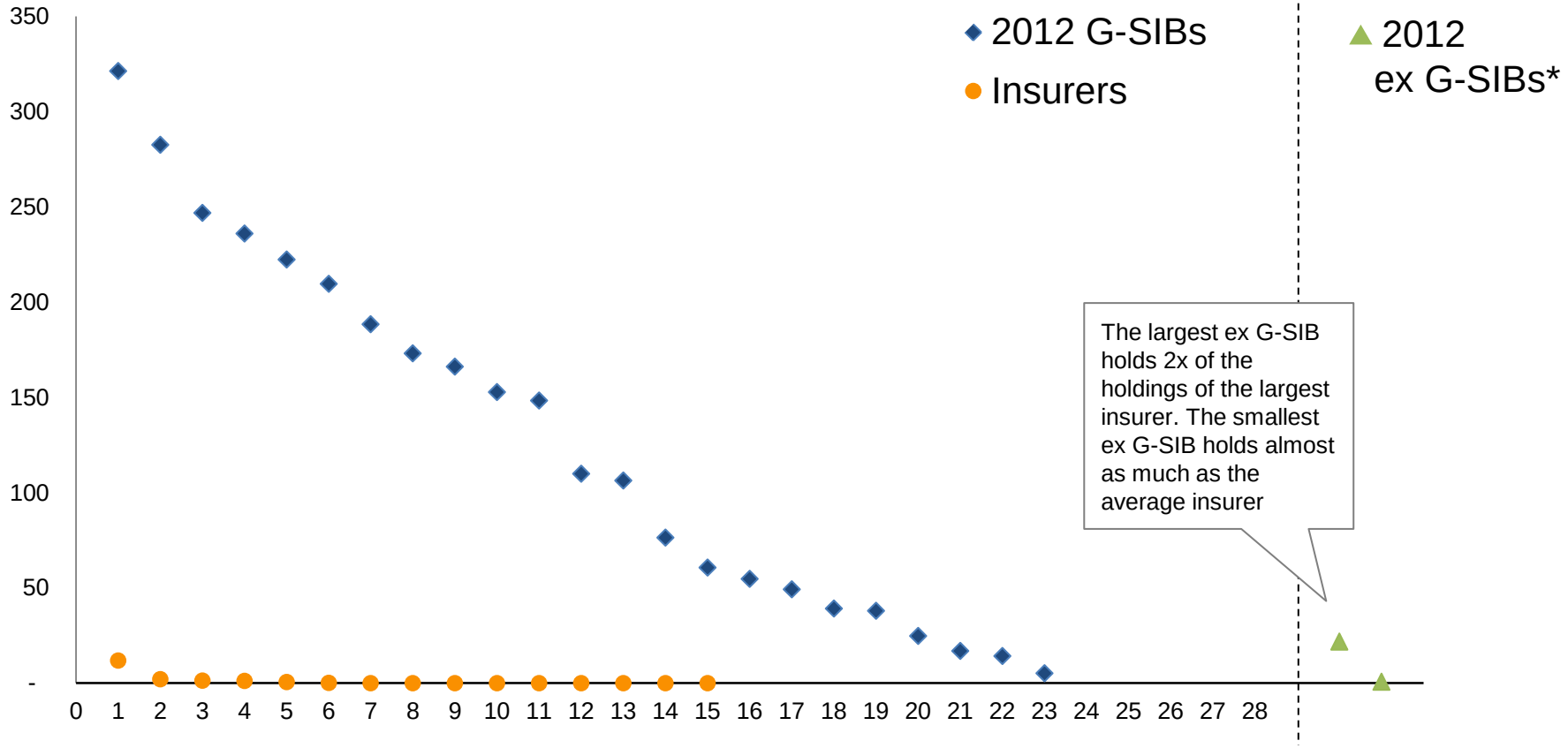
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

Interconnectedness – Net Positive Reverse Repo

The lowest ranked banks are 49x larger than the average insurer

Net Positive Reverse Repo (US$ BN, 2010)

Insurers and Banks



Sample size = 15 (insurers), 23 (banks)

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

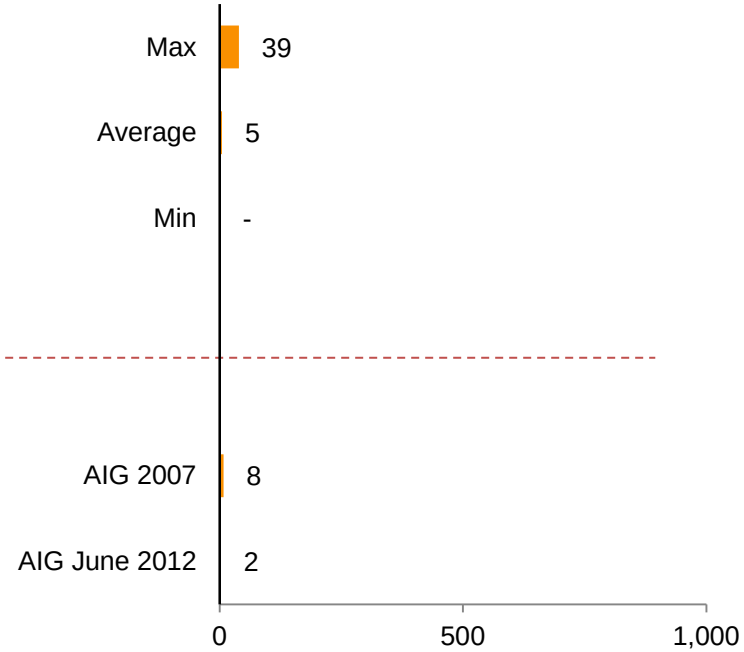
* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

NTNIA – Net Positive Repo & Securities Lending

The average bank is 25x larger than the average insurer

Net Positive Repo & Securities Lending (US$ BN, 2010)

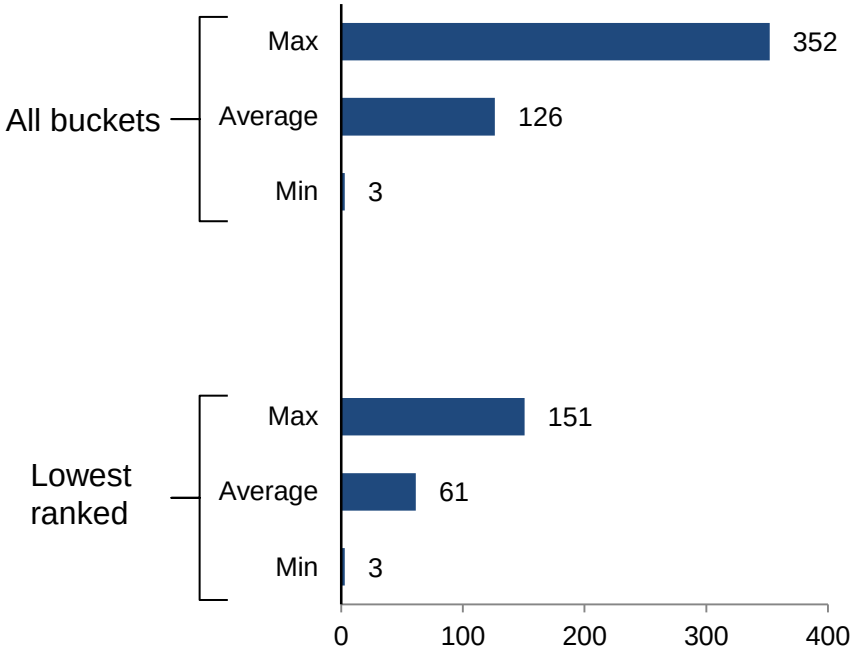
Insurers



Sample size = 23

Net Positive Repo & Securities Lending (US$ BN, 2010)

Banks



Sample size = 25 (all), 11 (bucket 1)

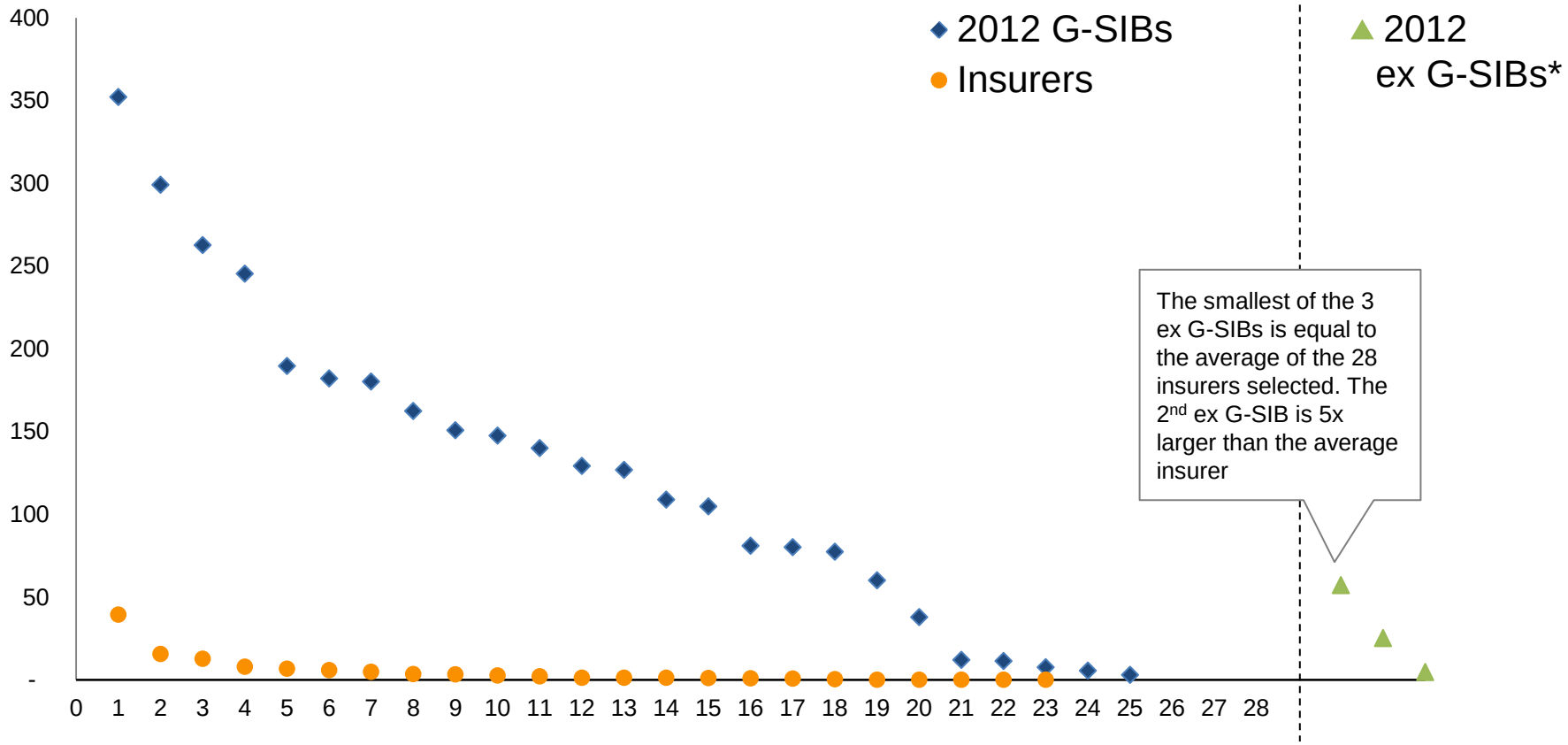
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis
NTNIA = Non Traditional and Non Insurance Activities

NTNIA – Net Positive Repo & Securities Lending

The lowest ranked banks are 12x larger than the average insurer

Net Positive Repo & Securities Lending (US$ BN, 2010)

Insurers and Banks



Sample size = 23 (insurers), 25 (banks)

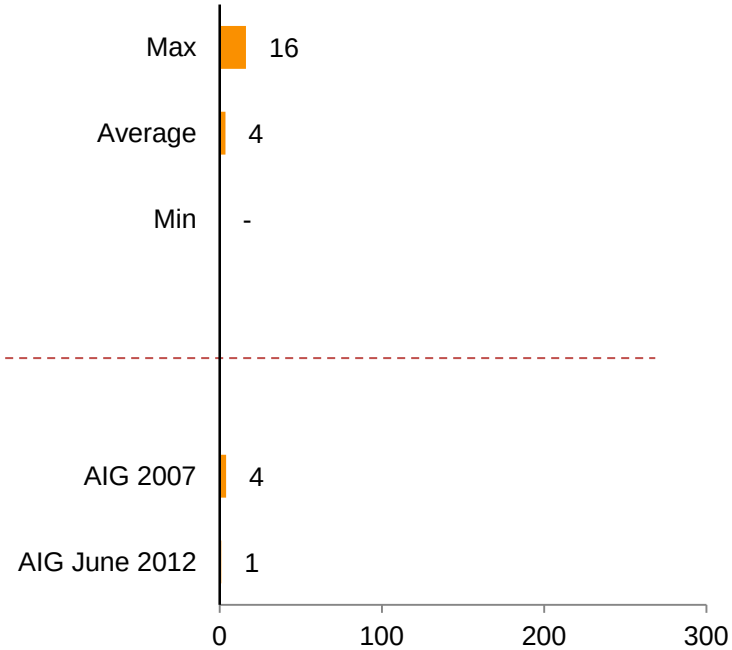
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis
NTNIA = Non Traditional and Non Insurance Activities
* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Interconnectedness – Borrowing from banks

The average bank is 22x larger than the average insurer

Borrowings from banks (US$ BN, 2010)

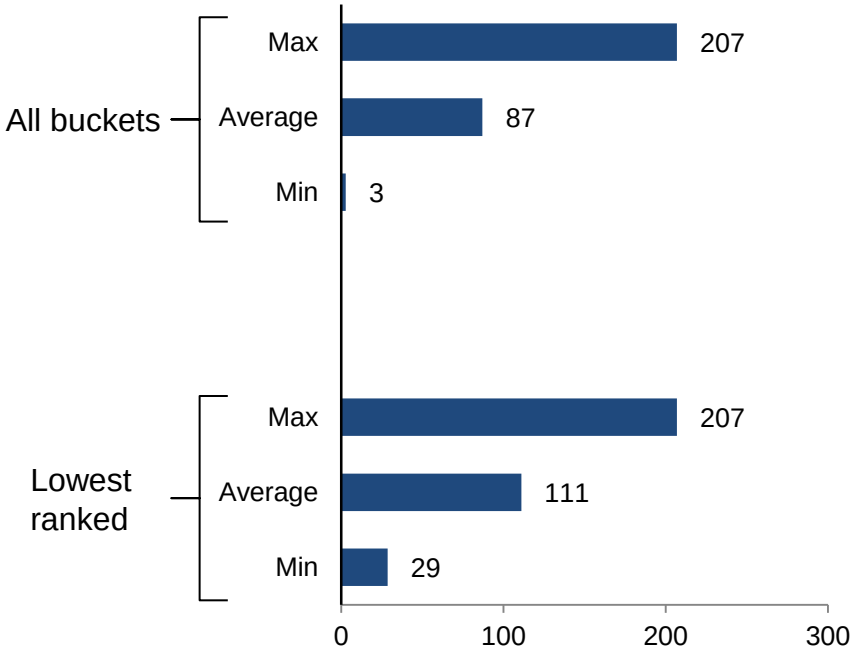
Insurers



Sample size = 24

Borrowings from banks (US$ BN, 2010)

Banks



Sample size = 21 (all), 9 (bucket 1)

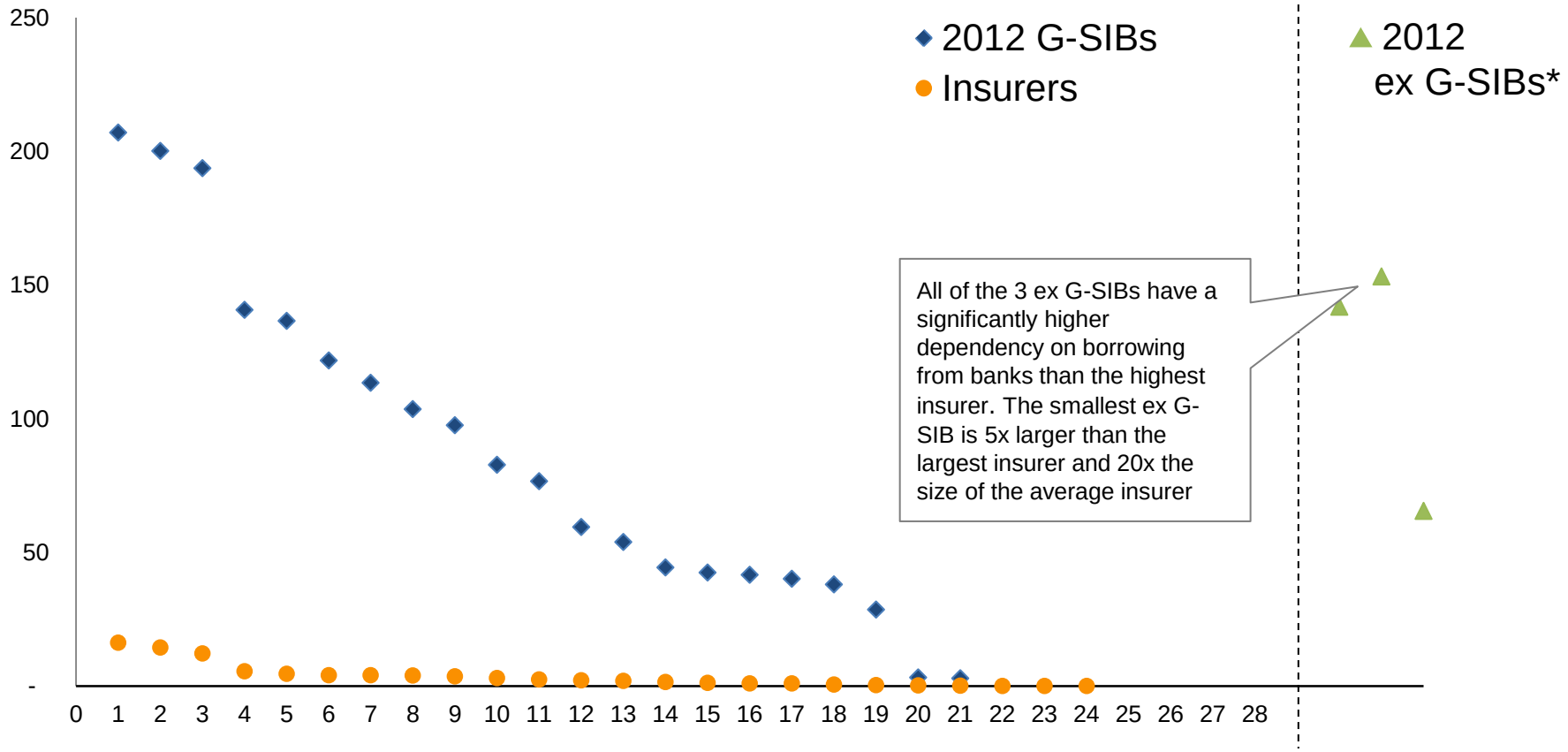
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

Interconnectedness – Borrowing from banks

The lowest ranked banks are 28x larger than the average insurer

Borrowing from banks (US$ BN, 2010)

Insurers and Banks



Sample size = 24 (insurers), 21 (banks)

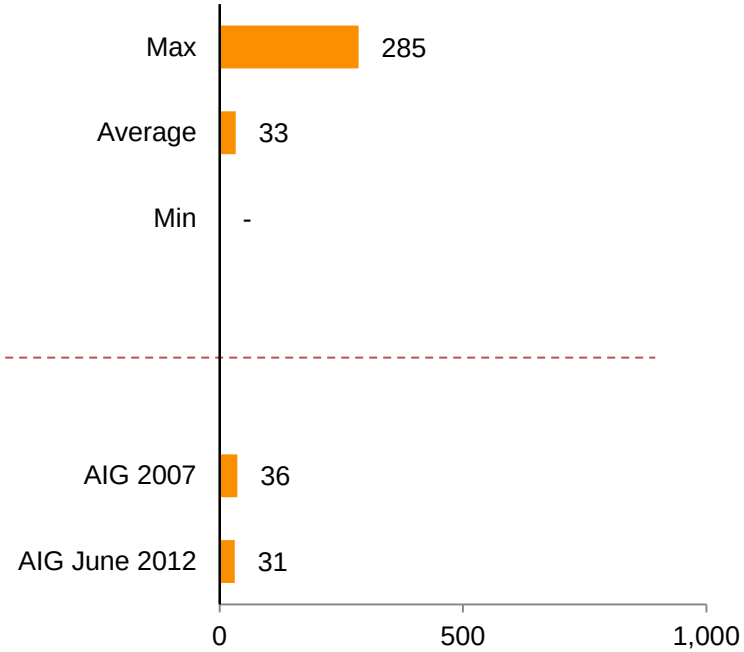
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

NTNIA – Assets held for trading purpose

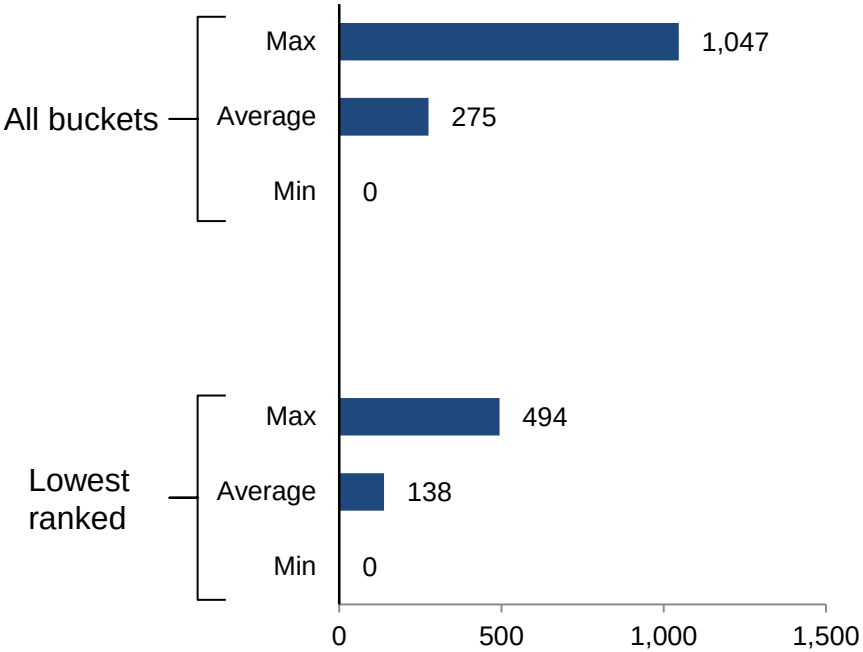
The average bank is 8x larger than the average insurer

Assets held for trading purpose (US$ BN, 2010)
Insurers



Sample size = 23

Assets held for trading purpose (US$ BN, 2010)
Banks



Sample size = 27 (all), 13 (bucket 1)

[1]Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis
NTNIA = Non Traditional and Non Insurance Activities

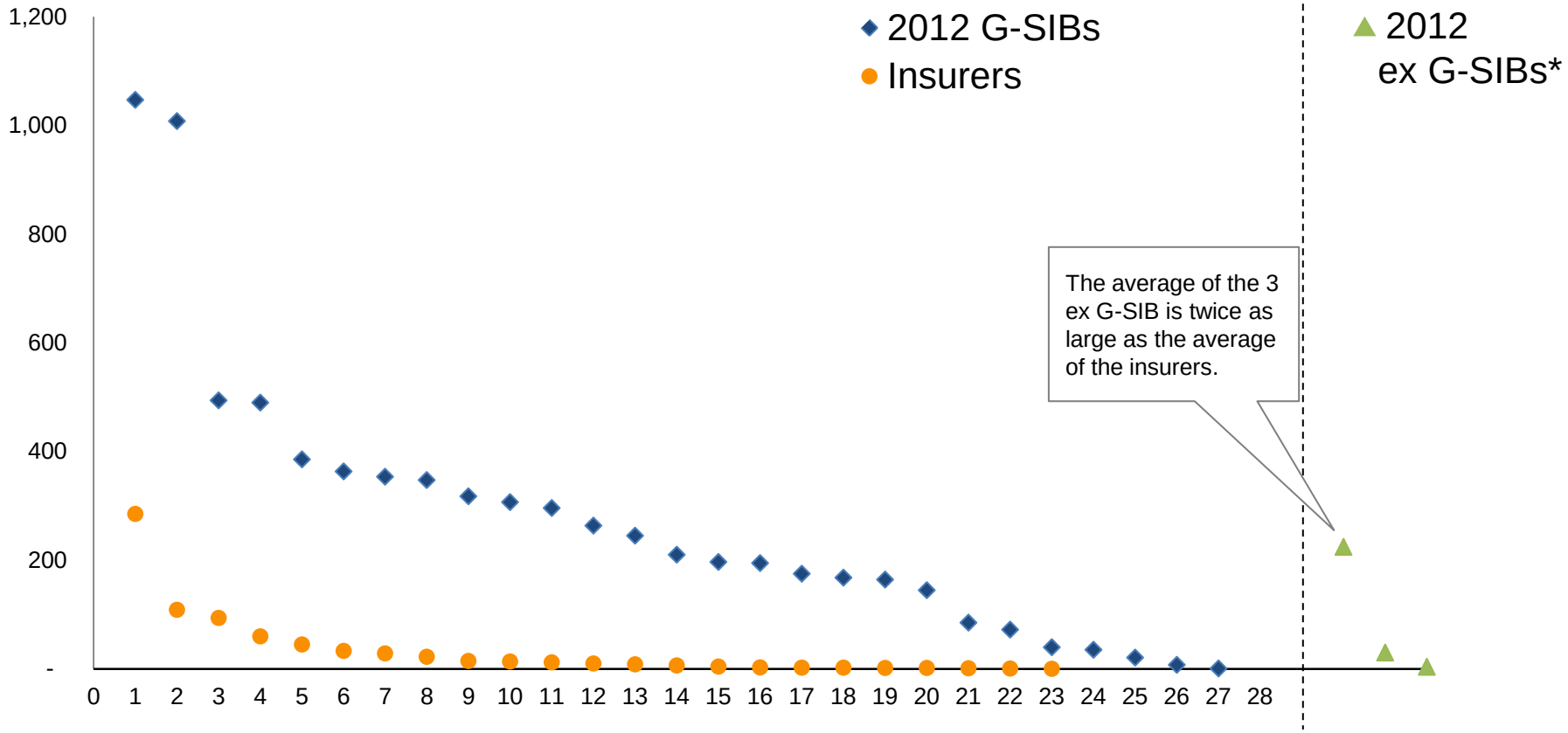
- Insurers have significantly less assets held for trading than banks

NTNIA – Assets held for trading purpose

The lowest ranked banks are 4x larger than the average insurer

Assets held for trading purpose (US$ BN, 2010)

Insurers and Banks



Sample size = 23 (insurers), 27 (banks)

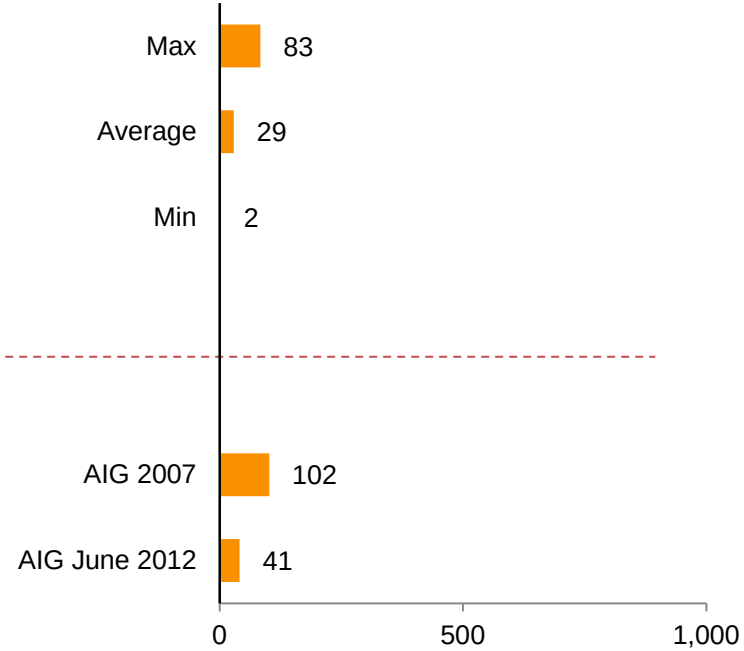
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis
NTNIA = Non Traditional and Non Insurance Activities

* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Interconnectedness – Debt securities holdings (FIs)

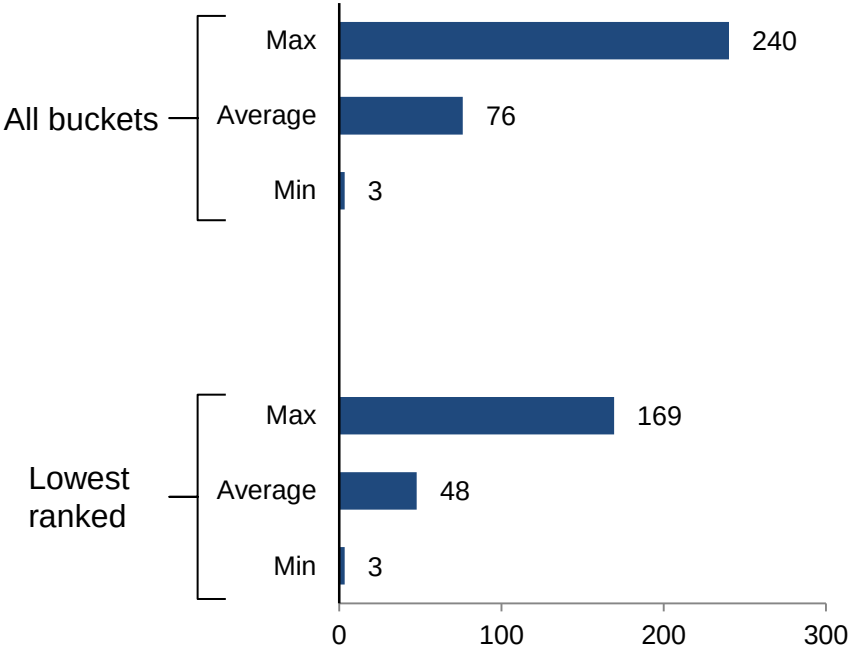
The average bank is 2.5x larger than the average insurer

Debt securities holdings (FIs)
US$ BN, 2010
Insurers



Sample size = 21

Debt securities holdings (FIs)
US$ BN, 2010
Banks



Sample size = 25 (all), 12 (bucket 1)

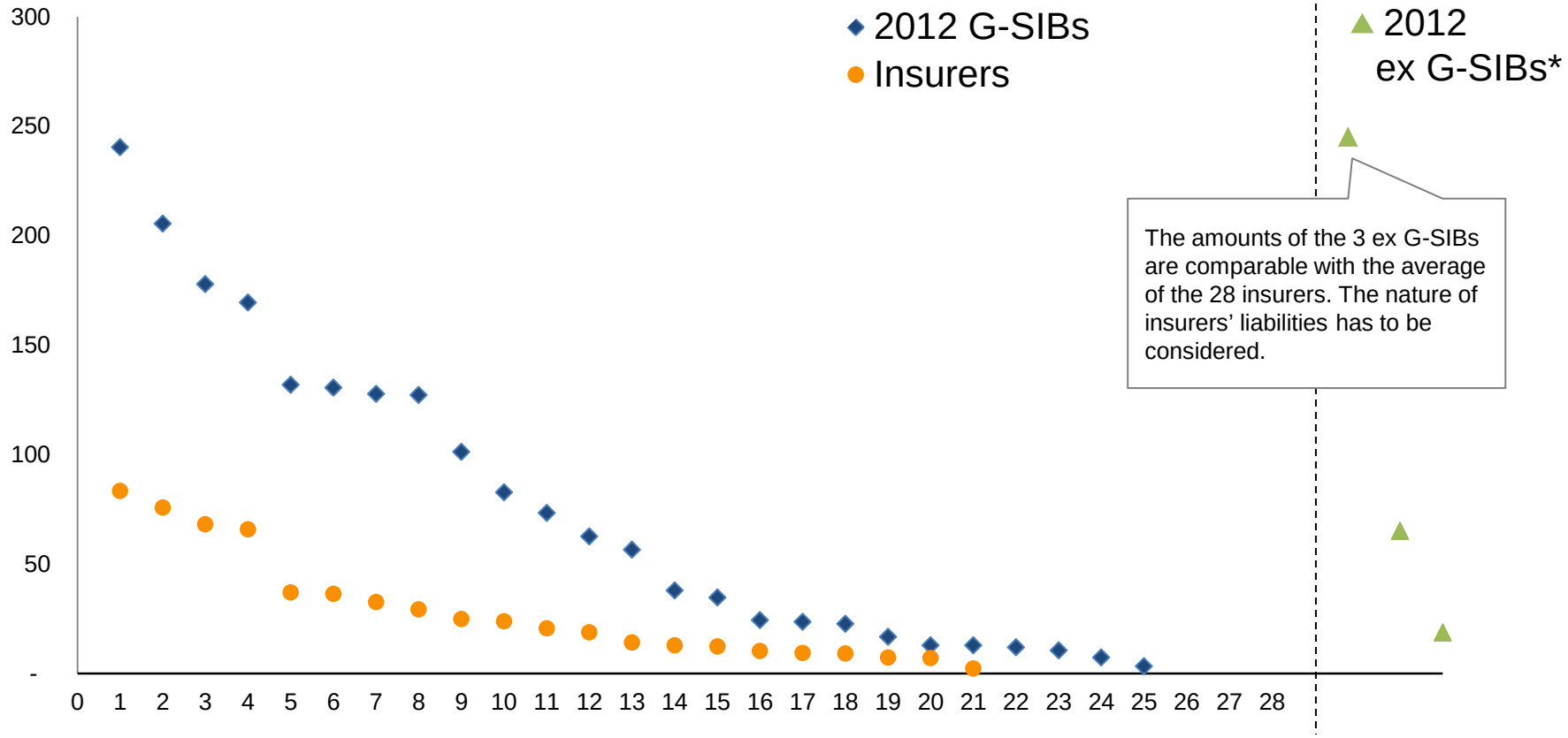
Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

Interconnectedness – Debt securities holdings (FIs)

The lowest ranked banks are 1.7x larger than the average insurer

Debt securities holdings (FIs) US$ BN, 2010

Insurers and Banks



Sample size = 21 (insurers), 25 (banks)

Source: Individual company annual reports, bankscope data, Geneva Association estimates, Oliver Wyman analysis

* Data for 2012 ex-G-SIBs is 2011, latest available annual data prior to decision by FSB

Constituent banks and insurers included in this analysis

Full sample of G-SIBs included in this analysis

Bucket	Bank	
4	• Citigroup • Deutsche Bank	• HSBC • JP Morgan Chase
3	• Barclays	• BNP Paribas
2	• Bank of America • Bank of New York Mellon • Credit Suisse • Goldman Sachs	• Mitsubishi UFJ FG • Morgan Stanley • Royal Bank of Scotland • UBS
1	• Bank of China • BBVA • Group BPCE • Group Crédit Agricole • ING Bank • Mizuho FG • Nordea	• Santander • Société Générale • Standard Chartered • State Street • Sumitomo Mitsui FG • Unicredit Group • Wells Fargo
2012 ex G-SIBs	• Commerzbank • Dexia	• Lloyds Banking Group

Source: Financial Stability Board, November 2012

Full sample of insurers included in this analysis

Category	Insurer	
Insurers Values as at 31 December 2010	• Aegon • AIA • Allianz • AMP Limited • Aviva • Axa • Berkshire Hathaway • China Life • CNP Assurances • Dai-ichi Life • Generali • Groupama • Legal & General • Hartford	• Manulife • MetLife • Munich Re • Nippon Life • Old Mutual • Prudential Financial • Prudential plc • Standard Life • Sun Life Financial • Swiss Life • Swiss Re • Talanx • Tokio Marine • Zurich
Additional benchmarks	• AIG 2007	• AIG June 2012

Background regarding The Geneva Association's work on financial stability and systemic risk regarding insurance

Background regarding The Geneva Association's work on financial stability and systemic risk regarding insurance

- We believe that the development and promotion of effective supervisory and regulatory policies to reduce systemic risk and address information gaps is for the benefit of all concerned, including the insurance sector.
- The Geneva Association has issued 5 research reports over the last 3 years to develop understanding of financial stability in insurance; ***Systemic Risk in Insurance*** (March 2010); ***Key Financial Stability Issues in Insurance*** (July 2010); ***Considerations for Identifying Systemically Important Financial Institutions in Insurance*** (April 2011); ***Insurance and Resolution in Light of the Systemic Risk Debate*** (February 2012); ***Surrenders in the Life Insurance Industry and their Impact on Liquidity*** (August 2012)
- The IAIS, operating under the direction of the FSB, is developing a methodology for the designation of global systemically important insurers (G-SIIs). Preliminary policy measures, including additional capital charges for designated insurers are in consultation until December 16.
- The Geneva Association continues to promote an activity based approach identifying the potentially Systemically Risky Activities (pSRA) and then determining the policy measures best used to reduce the impact of pSRA should they become SRA.
- Policymakers have acknowledged that traditional insurance activities is unlikely to create or amplify systemic risks. On July 19, the IAIS concluded that traditional reinsurance is unlikely to create or amplify systemic risk.
- If the designation process is not well targeted and not appropriate, any resulting policy measures could reduce the amount of insurance coverage available in the market place. This could reduce global growth potential as insurance is linked to GDP growth.

About The Geneva Association

Introduction to The Geneva Association

- The Geneva Association is a think tank that uses research and insight on fundamental insurance issues to provide an in-depth understanding of current and future global insurance issues. Through papers, presentations and discourse it is focused on the facilitation and development of the business of insurance and highlighting the importance of insurance for economies and society as a whole
- It interacts directly with the broad spectrum of relevant international organisations such as the IAIS, FSB, G20 and IASB (FASB) as well as academics, IGOs, NGOs and national bodies
- It provides a forum for its members, providing a worldwide unique platform for the top insurance CEOs. It organises the framework for its members to exchange ideas and discuss key strategic issues, especially at the General Assembly
- The Geneva Association also organises global networks for experts in various fields linked to insurance: finance, regulation, risk management, pension provision, health, etc. It also manages several extra-company networks of specialists from its members' companies; not least, chief financial officers, chief risk officers, chief investment officers
- It publishes leading insurance journals, the *Geneva Papers* and the *Geneva Risk and Insurance* review as well as newsletters, books and monographs
- Founded in 1973, it has offices in Geneva and Basel and is a not-for profit organisation funded by its membership.

The Annual General Assembly

- Largest annual industry gathering of insurance CEOs.
- Intensive CEO driven programme with international political keynote speakers and contributions from lead regulatory and supervisory institutions and world experts.
- Strategic discussions and detailed briefings on current and future international insurance issues and challenges.
- Peer-group discussions on special insurance issues.
- Combined Life and P&C focus – international strategic focus.