Reputation and trust are paramount

Non-Financial Risk Framework

NFR Governance
Non-Financial Risk areas

Compliance Risk
Unauthorised Activity Risk

Control & Processing Risk
Personal & Physical Security Risk

Employment Practice Risk
Information (Technology) Risk

Internal Fraud Risk
External Fraud Risk

Continuity Risk

Non-Financial Risk highlights

IT within risk appetite
Business Continuity Management Framework

Global E-Discovery tool developed to combat fraud
Dedicated centres of expertise and shared service centres

NFR related reporting
Data Analytics & Robotics

Enterprise Risk Management Programme
Management of IT Risk

**Business continuity & operational resilience**
- Crisis Management Organisation (CMO)
- BCM Framework
- Disaster Recovery Plan (DRP)
- Business Continuity Plan (BCP)

**Cybercrime resilience**
- ING regularly withstands cyber attacks
  - DDoS* prevention measures in place
  - Periodical hackathon

**Data & privacy protection**
- Data and systems security is paramount
- Data leakage protection tools
- Monitoring capabilities strengthened

---

* DDoS – Distributed Denial of Service
A lending-focused model with prudent credit risk management

**Total lending credit outstandings**

- **Retail Banking**: 37% of €675 bln
- **Wholesale Banking**: 63% of €675 bln

**Total RWA**

- **Credit RWA**: 11% of €314 bln
- **Operational RWA**: 2% of €314 bln
- **Market RWA**: 2% of €314 bln

**Credit RWA split**

- **Retail Banking**: 48% of €272 bln
- **Wholesale Banking**: 1% of €272 bln
- **Corporate Line**: 51% of €272 bln

* Lending credit outstanding is lending and money market credit outstandings, including guarantees and letters of credit, but excluding undrawn committed exposures (off-balance sheet positions). Going forward we would refer to Lending credit outstandings as “Lending”, unless stated otherwise.
Retail lending overview

Residential mortgages remain significant part of our book

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential mortgages</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>SME/Midcorp lending</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Consumer lending</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Other lending*</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Total</td>
<td>71%</td>
<td>69%</td>
</tr>
</tbody>
</table>

Retail lending across geographies

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>43%</td>
<td>35%</td>
</tr>
<tr>
<td>Belgium</td>
<td>18%</td>
<td>22%</td>
</tr>
<tr>
<td>Germany</td>
<td>19%</td>
<td>21%</td>
</tr>
<tr>
<td>Australia</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Poland</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Spain</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Total</td>
<td>€392 bln</td>
<td>€428 bln</td>
</tr>
</tbody>
</table>

* Includes €17 bln Bank Treasury and €15 bln of Other Retail lending as per end-2018
Credit Risk Management – Wholesale Banking
Credit risk concentration

Strong risk management framework

Three lines of defence

1. Front Office
2. Risk
3. Internal Audit

Personal responsibility on top of risk frameworks

Senior staff has direct responsibility for the client, sector, product or transaction

Concentration risk measured, managed and monitored on various levels

• Client (single name)
• Product
• Sector
• Country
• Internal capital consumption
• LGD
• Collateral/secondary risk

Book caps introduced

Activities no longer fitting business profile and/or risk appetite

• REF*
• Leveraged finance

* REF - Real Estate Finance, RED – Real Estate Development, REIM – Real Estate Investment Management
Well-diversified lending across our global franchise...

**Total Wholesale Bank**

- **€248 bln**
  - 21% (8% Trade & Commodity Finance (TCF)*, 12% Project and Asset-based Finance excl. TCF*, 15% Real Estate Finance*, 14% General Lending, 15% Other)
  - €146 bln
  - €102 bln

**Americas**

- **€47 bln**
  - 6% (3% Trade & Commodity Finance (TCF)*, 9% Project and Asset-based Finance excl. TCF*, 12% Real Estate Finance*, 18% General Lending, 6% Other)

**EMEA**

- **€157 bln**
  - 27% (9% Trade & Commodity Finance (TCF)*, 6% Project and Asset-based Finance excl. TCF*, 15% Real Estate Finance*, 18% General Lending, 6% Other)

**Asia**

- **€44 bln**
  - 14% (3% Trade & Commodity Finance (TCF)*, 9% Project and Asset-based Finance excl. TCF*, 24% Real Estate Finance*, 33% General Lending, 22% Other)

**Average maturities**

- >1 year: 4.0 years

Figures on slide as per end-2018

* Products jointly representing Industry Lending segment

** Based on residual maturity. Average maturity of the book > 1 year is ~4 years

**Based on residual maturity. Average maturity of the book > 1 year is ~4 years**
...with a clear focus on senior and secured deal structures

WB average internal counterparty rating distribution improved*

<table>
<thead>
<tr>
<th>Year</th>
<th>AAA</th>
<th>AA</th>
<th>A</th>
<th>BBB</th>
<th>BB</th>
<th>B</th>
<th>CCC</th>
<th>&lt; CCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>4%</td>
<td>11%</td>
<td>36%</td>
<td>33%</td>
<td>9%</td>
<td>3%</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td>2018</td>
<td>3%</td>
<td>35%</td>
<td>40%</td>
<td>3%</td>
<td>12%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

> 55% of lending credit outstandings are investment grade

Nearly all lending is senior**

99.98%

0.02%

Senior
Subordinated

Lending cover percentages including guarantees received

34%

31%

35%

€248 bln***

Fully covered
Partially covered
No cover

Figures as per end-2018
* Excluding Bank Treasury
** Lending is ING Group total loans and advances to customers
*** Cover pool value (€214 bln) exceeds total underlying loan amount (€163 bln or 66% of WB lending book) due to overcollateralisation
Wholesale Banking through-the-cycle risk costs

Risk costs Wholesale Banking

Risk costs Project & Asset-based Finance (in bps of average RWA)

Risk costs General Lending (in bps of average RWA)
Proactive restructuring preserves value

Proactive restructuring

Global Credit Restructuring files with no losses

75%

Prudent provisioning

WB through-the-cycle risk costs vs write-offs
Cumulative over 2008-2018

Risk costs

€6.4 bln

Write-offs

€5.5 bln

Over ~€210 bln average WB lending book over 2008-2018
Business overview

- Focus on larger sponsors with an established track record and a good history of seeking to resolve issues in event of underperformance by the acquired business
- Mainly active in large developed markets
- Granular book of €8.4 bln as per end-2018 (average commitment of ~€25 mln) with a strong industry diversification
- Sell-down targets constantly monitored and met (on average ~40 days from mandate to allocation)
- Since 2007, significant reduction (45%) of the underwriting limit for leveraged finance transactions

Main actions taken

- Global cap of €9.6 bln
- Maximum final take for single transaction ~€25 mln recently introduced
- Maximum leverage 6.5x
- No single underwrites

Leveraged finance book managed within a solid framework

Leveraged finance book* focused on developed markets (as per end-2018)

- 57% Americas
- 1% Asia
- 42% EMEA

Total: €8.4 bln

Leveraged finance book* highly diversified by industry (as per end-2018)

- 20% Services
- 17% Chemicals, Health & Pharmaceuticals
- 10% General Industries
- 9% Non-Bank Financial Institutions
- 6% Food, Beverages & Personal Care
- 4% Retail
- 4% Transportation & Logistics
- 3% Automotive
- 7% Builders & Contractors
- 3% Other

Total: €8.4 bln

* Leveraged finance is defined as Private Equity driven leveraged finance with higher than 4x leverage. Leveraged finance book is total commitments (i.e. including undrawn)
Real Estate Finance diversified and de-risked

Main actions taken
- REF exposure limit tightened in 2018
- Geographical concentration to the Netherlands reduced
- Portfolio substantially de-risked as evidenced by reduction in LTV (average 53%) and the discontinuation of Real Estate Development
- Increased focus on Originate-to-Distribute

Lending concentration in the Netherlands decreased since 2007*

2007 2018

<table>
<thead>
<tr>
<th>Country</th>
<th>2007</th>
<th>2018</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>57%</td>
<td>44%</td>
<td>+22%</td>
</tr>
<tr>
<td>Germany</td>
<td>9%</td>
<td>6%</td>
<td>-3%</td>
</tr>
<tr>
<td>France</td>
<td>6%</td>
<td>7%</td>
<td>+1%</td>
</tr>
<tr>
<td>US</td>
<td>6%</td>
<td>9%</td>
<td>+3%</td>
</tr>
<tr>
<td>Spain</td>
<td>4%</td>
<td>3%</td>
<td>-1%</td>
</tr>
<tr>
<td>UK</td>
<td>5%</td>
<td>7%</td>
<td>+2%</td>
</tr>
<tr>
<td>Italy</td>
<td>11%</td>
<td>9%</td>
<td>-2%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
<td>4%</td>
<td>-2%</td>
</tr>
</tbody>
</table>

REF breakdown by type (as per end-2018)

<table>
<thead>
<tr>
<th>Type</th>
<th>2007</th>
<th>2018</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>35%</td>
<td>32%</td>
<td>-3%</td>
</tr>
<tr>
<td>Residential</td>
<td>7%</td>
<td>15%</td>
<td>+8%</td>
</tr>
<tr>
<td>Unsecured</td>
<td>7%</td>
<td>9%</td>
<td>+2%</td>
</tr>
<tr>
<td>Industrial</td>
<td>4%</td>
<td>3%</td>
<td>-1%</td>
</tr>
<tr>
<td>Construction</td>
<td>32%</td>
<td>7%</td>
<td>-25%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
<td>5%</td>
<td>-1%</td>
</tr>
</tbody>
</table>

Construction finance and unsecured lending further reduced (in € bln)

- General secured lending: €30.5 bln to €33.8 bln (+22%)
- Construction finance: €33.8 bln to €30.5 bln (-72%)
- Unsecured lending: €30.5 bln to €33.8 bln (-37%)

* Geographical split based on initiating office
Oil & Gas book structured to withstand adverse market conditions

Business overview
- We lend to operating companies, keeping a senior position versus other creditors
- €4.3 bln directly exposed to commodity price risk

Main actions taken
Caps introduced for:
- Offshore drilling (exposure halved since 2015)
- Reserve Based Lending at regional level

<table>
<thead>
<tr>
<th>Trade Finance</th>
<th>Export Finance</th>
<th>Corporate Lending</th>
<th>Industry Lending: Midstream</th>
<th>Industry Lending: Other Offshore Services Companies</th>
<th>Industry Lending: Offshore Drilling Companies</th>
<th>Industry Lending: Reserve Based Lending</th>
</tr>
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<tr>
<td>• Short term self-liquidating trade finance, generally for major trading companies, either pre-sold or price-hedged</td>
<td>• ECA-covered loans in oil &amp; gas sector: typically 95% - 100% credit insured</td>
<td>• Predominantly loans to investment grade large integrated oil &amp; gas companies</td>
<td>• These assets typically generate revenues from long-term tariff based contracts, not affected by oil &amp; gas price movements</td>
<td>• Directly impacted by oil &amp; gas markets</td>
<td>• Directly impacted by oil &amp; gas markets</td>
<td>• Smaller independent oil &amp; gas producers directly exposed to oil &amp; gas price risk</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Focus on first cost quartile producers</td>
</tr>
</tbody>
</table>

Lending credit outstandings by asset type

Total €38.0 bln
€4.3 bln
€33.7 bln

- 50% Not directly exposed to commodities price risk
- 16% Directly exposed to commodities price risk
- 8% Smaller independent oil & gas producers
- 6% ECA-covered loans in oil & gas sector
- 2% Predominantly loans to investment grade large integrated oil & gas companies
- 1% These assets typically generate revenues from long-term tariff based contracts, not affected by oil & gas price movements
- 1% Directly impacted by oil & gas markets
- 8% Directly impacted by oil & gas markets

Business overview
- We lend to operating companies, keeping a senior position versus other creditors
- €4.3 bln directly exposed to commodity price risk

Main actions taken
Caps introduced for:
- Offshore drilling (exposure halved since 2015)
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Focus on first cost quartile producers</td>
</tr>
</tbody>
</table>
A secured lender in shipping focused on selected clients

Business overview
- Not a traditional ship finance mortgage lender
- Secured corporate lender
- Recourse to a corporate balance sheet
- Long-term client relationships with companies with clear strategies, appropriate capital structures and access to liquidity
- Focus on modern tonnage in commoditised asset classes with active secondary markets
- Legacy short sea portfolio reducing in a balanced way via vessel sales as opportunities arise
- Geopolitical factors (trade war), economic transition in China, the commodity cycle and shipping supply will continue to be key drivers

Main actions taken
Near-costal & inland water freight book:
- Stop new transactions
- Progressively reduce exposure

Shipping lending by asset type (as per end-2018)

<table>
<thead>
<tr>
<th>Stage 3 ratio*</th>
<th>Transportation deep sea &amp; other</th>
<th>Shipping services</th>
<th>Transportation near-costal &amp; inland water freight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.6%</td>
<td>0.4%</td>
<td>20.3%</td>
</tr>
</tbody>
</table>

Deep sea shipping through-the-cycle (in € mln)
Cumulative over 2008-2018

Risk costs
- ~€90 mln

Write-offs
- ~€50 mln

* As per end-2018
Important legal information

ING Group’s annual accounts are prepared in accordance with International Financial Reporting Standards as adopted by the European Union (‘IFRS-EU’). In preparing the financial information in this document, except as described otherwise, the same accounting principles are applied as in the 2018 ING Group consolidated annual accounts. All figures in this document are unaudited. Small differences are possible in the tables due to rounding.

Certain of the statements contained herein are not historical facts, including, without limitation, certain statements made of future expectations and other forward-looking statements that are based on management’s current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements. Actual results, performance or events may differ materially from those in such statements due to a number of factors, including, without limitation: (1) changes in general economic conditions, in particular economic conditions in ING’s core markets, (2) changes in performance of financial markets, including developing markets, (3) potential consequences of the United Kingdom leaving the European Union or a break-up of the euro, (4) changes in the fiscal position and the future economic performance of the US including potential consequences of a downgrade of the sovereign credit rating of the US government, (5) potential consequences of a European sovereign debt crisis, (6) changes in the availability of, and costs associated with, sources of liquidity such as interbank funding, (7) changes in conditions in the credit and capital markets generally, including changes in borrower and counterparty creditworthiness, (8) changes affecting interest rate levels, (9) inflation and deflation in our principal markets, (10) changes affecting currency exchange rates, (11) changes in investor and customer behaviour, (12) changes in general competitive factors, (13) changes in or discontinuation of ‘benchmark’ indices, (14) changes in laws and regulations and the interpretation and application thereof, (15) changes in compliance obligations including, but not limited to, those posed by the implementation of DAC6, (16) geopolitical risks, political instabilities and policies and actions of governmental and regulatory authorities, (17) changes in standards and interpretations under International Financial Reporting Standards (IFRS) and the application thereof, (18) with respect to purchase accounting assumptions and methodologies, and other changes in accounting assumptions and methodologies including changes in valuation of issued securities and credit market exposure, (19) changes in ownership that could affect the future availability to us of net operating loss, net capital and built-in loss carry forwards, (20) changes in credit ratings, (21) the outcome of current and future legal and regulatory proceedings, (22) operational risks, such as system disruptions or failures, breaches of security, cyber-attacks, human error, changes in operational practices or inadequate controls including in respect of third parties with which we do business, (23) risks and challenges related to cybercrime including the effects of cyber-attacks and changes in legislation and regulation related to cybersecurity and data privacy, (24) the inability to protect our intellectual property and infringement claims by third parties, (25) the inability to retain key personnel, (26) business, operational, regulatory, reputation and other risks in connection with climate change, (27) ING’s ability to achieve its strategies, including projected operational synergies and cost-saving programmes and (28) the other risks and uncertainties detailed in this annual report of ING Groep N.V. (including the Risk Factors contained therein) and ING’s more recent disclosures, including press releases, which are available on www.ING.com. (29) This document may contain inactive textual addresses to internet websites operated by us and third parties. Reference to such websites is made for information purposes only, and information found at such websites is not incorporated by reference into this document. ING does not make any representation or warranty with respect to the accuracy or completeness of, or take any responsibility for, any information found at any websites operated by third parties. ING specifically disclaims any liability with respect to any information found at websites operated by third parties. ING cannot guarantee that websites operated by third parties remain available following the publication of this document, or that any information found at such websites will not change following the filing of this document. Many of these factors are beyond ING’s control. Any forward looking statements made by or on behalf of ING speak only as of the date they are made, and ING assumes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information or for any other reason. This document does not constitute an offer to sell, or a solicitation of an offer to purchase, any securities in the United States or any other jurisdiction.