
CHUBB®

Chubb Limited
Investor Presentation
December 2019

YTD 2019: Strong Operating Results

(\$ in billions of U.S. dollars, except per share amounts and ratios)

	YTD 9/30/18		YTD 9/30/19	Change	
Gross Premiums Written	\$28.7	→	\$30.2	5.1% 6.6% C\$	↑
Net Premiums Written	\$23.2	→	\$24.3	4.5% 6.2% C\$	↑
P&C Combined Ratio <i>CAY ex. CATs</i>	89.8% 88.0%	→	89.9% 89.0%	0.1% pts 1.0% pts	↔ ↓
Core Operating Income	\$3.5	→	\$3.6	3.7% 5.5% C\$	↑
Core Operating Earnings per Share	\$7.42	→	\$7.83	5.5%	↑
Operating Cash Flow	\$3.9	→	\$4.9	26.1%	↑
Shareholders' Equity	\$50.9	→	\$54.6	7.1%	↑
Book Value per Share	\$110.46	→	\$120.33	8.9%	↑
Tangible Book Value per Share	\$66.83	→	\$76.21	14.0%	↑
Invested Assets	\$101.2	→	\$107.2	5.9%	↑
Market Capitalization¹	\$61.6	→	\$73.2	18.8%	↑
Core Operating Return on Equity <i>Core Operating Return on Tangible Equity</i>	9.1% 15.2%	→	9.3% 15.3%	0.2% pts 0.1% pts	↑ ↑

Chubb Today – Who We Are

Underwriting Excellence

- Superior underwriting culture
- P&C combined ratio 8 percentage points better than peers' average over past 10 years¹

Proven Leadership

- Management: hands-on with deep global industry knowledge, builders; underwriters lead the company
- Stability: leaders average 30 years of industry experience, with nearly 20 at the company

Global Presence

- 600+ offices in 54 countries and territories = local presence globally
- A leading global commercial (60%) and consumer (40%) insurer
- A leading commercial and the #1 HNW insurer in the U.S.; substantial operations in Asia and Latin America growing at high single/double-digit rates

Exceptional Service

- Renowned for service excellence in claims, risk engineering and related services
- Digitally enhanced
- Recognized and admired brand

CHUBB®

The largest publicly traded P&C insurer globally, providing commercial insurance to large corporate, mid-market and small businesses and consumer insurance to lower-middle income to high net worth individuals and families

Strategic Optionality

- Earning power, strategy, balance sheet and scale, including global presence, capabilities and knowledge
- Well positioned to quickly take advantage of secular and cyclical growth trends globally
- Digital capability fast evolving

Product & Distribution Breadth

- 200+ P&C products
- Distribution through brokerage, independent and exclusive agents and direct-to-consumer platform partnerships

Scale & Financial Strength²

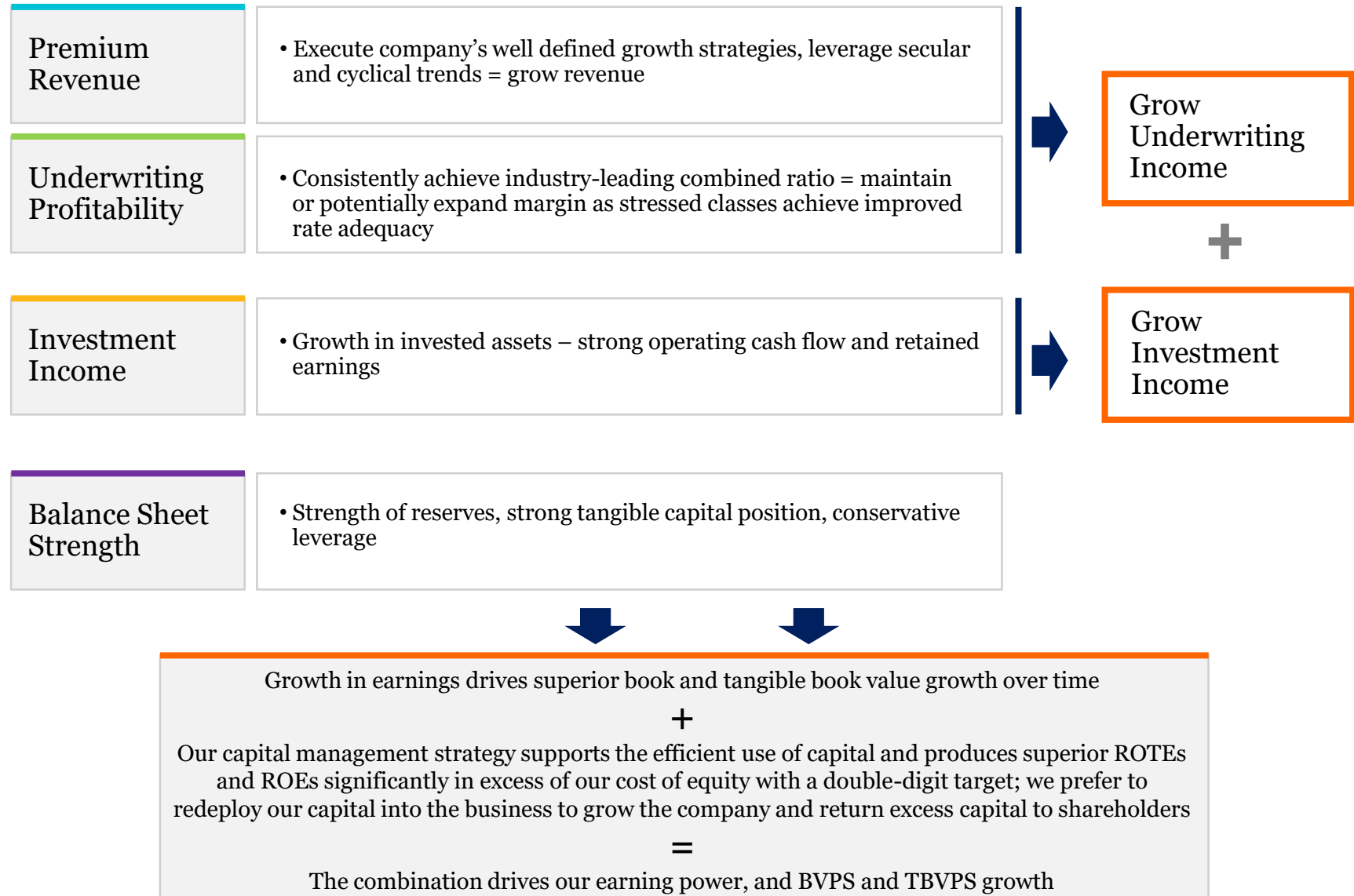
- \$55 billion shareholders' equity
- \$68 billion total capital
- \$175 billion in assets
- Top ratings – “AA” S&P and “A++” AM Best

Strong Culture

- Disciplined and execution-oriented; high-performance
- Flat organization: rapid decision-making
- Accountable, frank
- Optimistic

Our Financial Objectives

Chubb is a growth company as defined by growth in book and tangible book value. Our earning power will continue to come first from growing the company.



Strategic Priorities

Secular
Fastest
Growth
Opportunities

Competitive
Profile &
Enhanced
Growth

Description

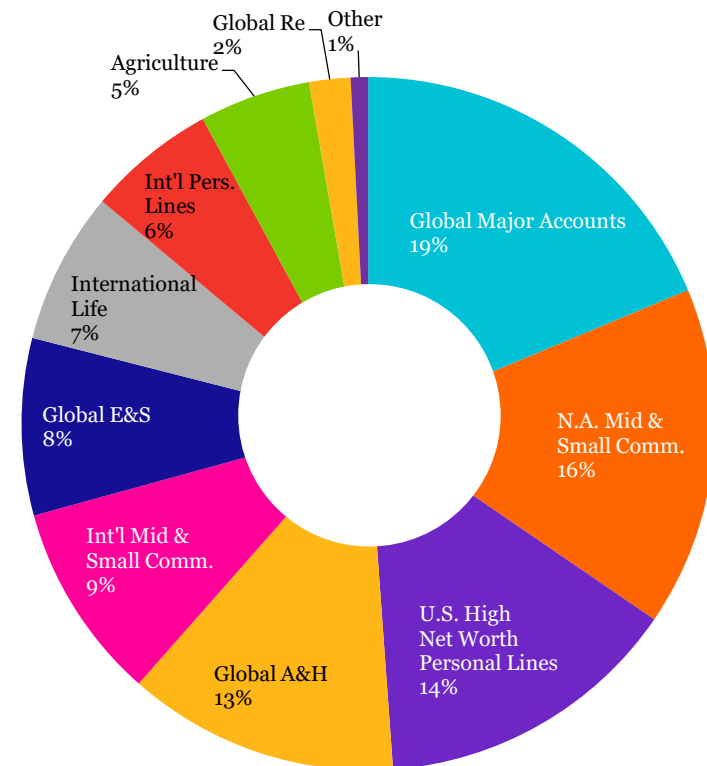
- Growth of consumer classes and small and mid-sized businesses globally (in the U.S. and developed and developing economies in Asia and Latin America, and Europe)
- China, including impact on Asia
- Digital capabilities: data and analytics, technology, product, distribution, underwriting, customer experience, cost reduction

Cyclical
Growth
Opportunities

- Firming commercial P&C pricing environment
- 45%+ of portfolio and growing – across many short- and long-tail classes:
 - Major accounts globally
 - U.S. middle market
 - E&S wholesale – London and U.S.
 - U.K., Australia and portions of Continental Europe and Asia retail
- Flight to quality – Choose Chubb

Chubb Portfolio by Segment

2019F NPW + Deposits: \$33.5B



Building Chubb to Thrive in a Digital Age

Our Vision: Transform Chubb to be compelling in a digital age: becoming digital = fully integrated into our business, adding to revenue growth, driving expense reductions, modernizing what insurance does and how it does it.

Five Pillars

- *Experience:* Customer experience as the product
- *Distribution:* Digital channel for our products (e-Partners, e-Traditional)
- *Capability:* Digitally enabled product, OMNI-channel service and claims
- *Insights:* Underwriting and claims excellence through data and analytics
- *Process:* Intelligent automation of tasks, both underwriting and processes



Our Approach

- Focus on portfolio of internal digital bets
 - Made rapidly
 - Scaled as/where successful
- Quickly monetize our capability (premium, expense saves)
- Invest in foundational technology and service

Chubb Digital Today

- Major partners (banks, travel, ride-hail)
- Digital tech foundation
- Basic end-to-end digital services
- Two-question underwriting (small business) and claims (A&H)
- New technologies, e.g., AI, IoT
- Modernizing legacy tech infrastructure – significant spend
- Chubb digital DNA and Centers of Excellence



Pathway to Scale

- Distribution partner funnel focus
 - Customer: COG consumers and North America HNW
 - Businesses: small-to-mid-size, large
- With partners, innovate insurance product for today's expectations (onboarding, service, claims, value-add)
- Quicken product development cycle times
- Solve operational last mile

Financial Outcomes:

GPW by 2022:

- e-Partners: \$700M+
- e-Traditional: \$6B

Automation expense savings by 2023:

- \$500M (gross); \$350M (net of expenses)

Investment Portfolio: Stability and Growth

- Slowing global growth, low inflation for now, loose central bank policies and likely negative rates will continue to depress fixed income yields
- While credit spreads remain narrow, rising fiscal deficits may very well drive the yield curve
- We will maintain a conservative approach to our invested asset allocation and not “reach for yield”
- Enhancements to the fixed income portfolio have stabilized our book yield without raising overall portfolio risk
- Our strong cash flow has and will continue to support net investment income

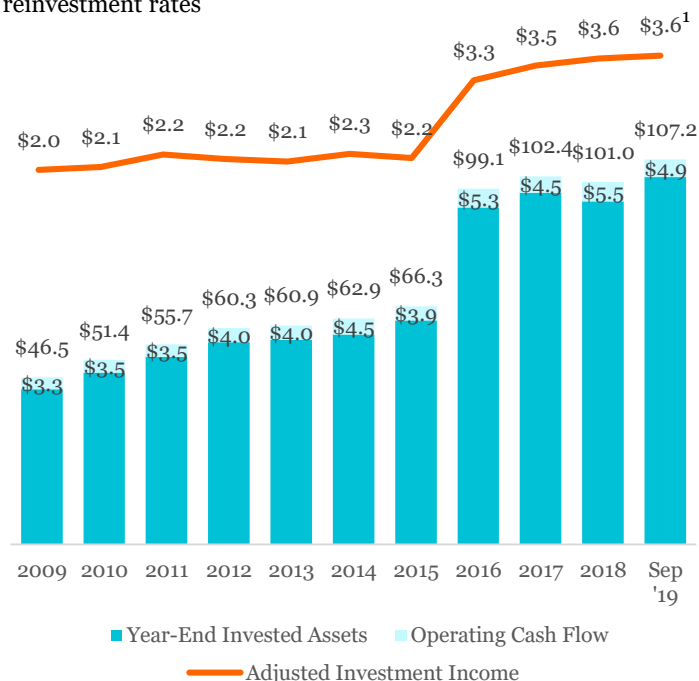
Market vs. Book Yield

Chubb book yield down only 160bp vs. 420bp for market yield, despite maintaining average investment quality of AA



Assets & Investment Income (\$B)

Strong operating cash flow more than makes up for falling reinvestment rates



Long-Term Operational & Financial Outperformance (10 Years)

Chubb has delivered on its financial goals and outperformed its peers across most metrics

Premium & Earnings Growth		UW Profit	Book Value Growth		Average ROE & ROTE		Valuation
NPW ('10-'19E) ¹	Op. Earnings ('10-'19E) ^{1,2}	CoR ('09-'18 Avg.) ¹	BVPS (9/09-9/19) ⁵	TBVPS (9/09-9/19) ⁵	Avg. ROE ('09-'18)	Avg. ROTE ('09-'18)	Market Cap Growth (9/09-9/19) ³
122%	80%	90.4%	116%	71%	11.3%	15.1%	307%
XL 110%	AXA 71%	TRV 93.9%	TRV 94%	CNA 27%	ZURN 11.0%	TRV 13.7%	HIG 116%
TRV 35%	CNA 48%	ALV 95.5%	AIG ⁴ 87%	AXA 25%	AXA 9.9%	HIG 7.9%	CNA 106%
HIG 17%	ALV 42%	AXA 97.4%	ALV 45%	ZURN 23%	HIG 7.5%	CNA 7.1%	ALV 72%
CNA 10%	ZURN 26%	XL 97.6%	CNA 26%	HIG 1%	CNA 7.0%	AIG 1.7%	ZURN 63%
AXA 4%	HIG 6%	CNA 97.6%	HIG 15%		AIG 2.9%		TRV 42%
ALV 1%	XL 6%	HIG 98.4%	ZURN 15%				AXA 9%
ZURN (10%)	TRV (18%)	ZURN 99.0%	AXA 7%				
AIG (43%)		AIG 110.3%					

- (1) XL for 9 years through 2018 acquisition; elsewhere AXA XL segment where it exists
- (2) AIG excluded due to negative earnings in 2010
- (3) AIG excluded due to impact from government intervention
- (4) AIG adjusted for US Treasury Equity Investment in 2009
- (5) Zurich, AXA and Allianz through most recent available as of 6/30/2019

Annual metrics through latest full year of available data: NPW and Op. Earnings through 2019E using Wall Street estimates where available, annualized YTD 9/30/19 actuals for Allianz, HIG, XL and Zurich (NPW), annualized YTD 6/30/19 actuals for AXA (NPW) and XL (Op. Earnings); CoR, ROE and ROTE through 2018 actuals. Point in time metrics (BVPS, TBVPS and Market Cap) through September 2019 actuals

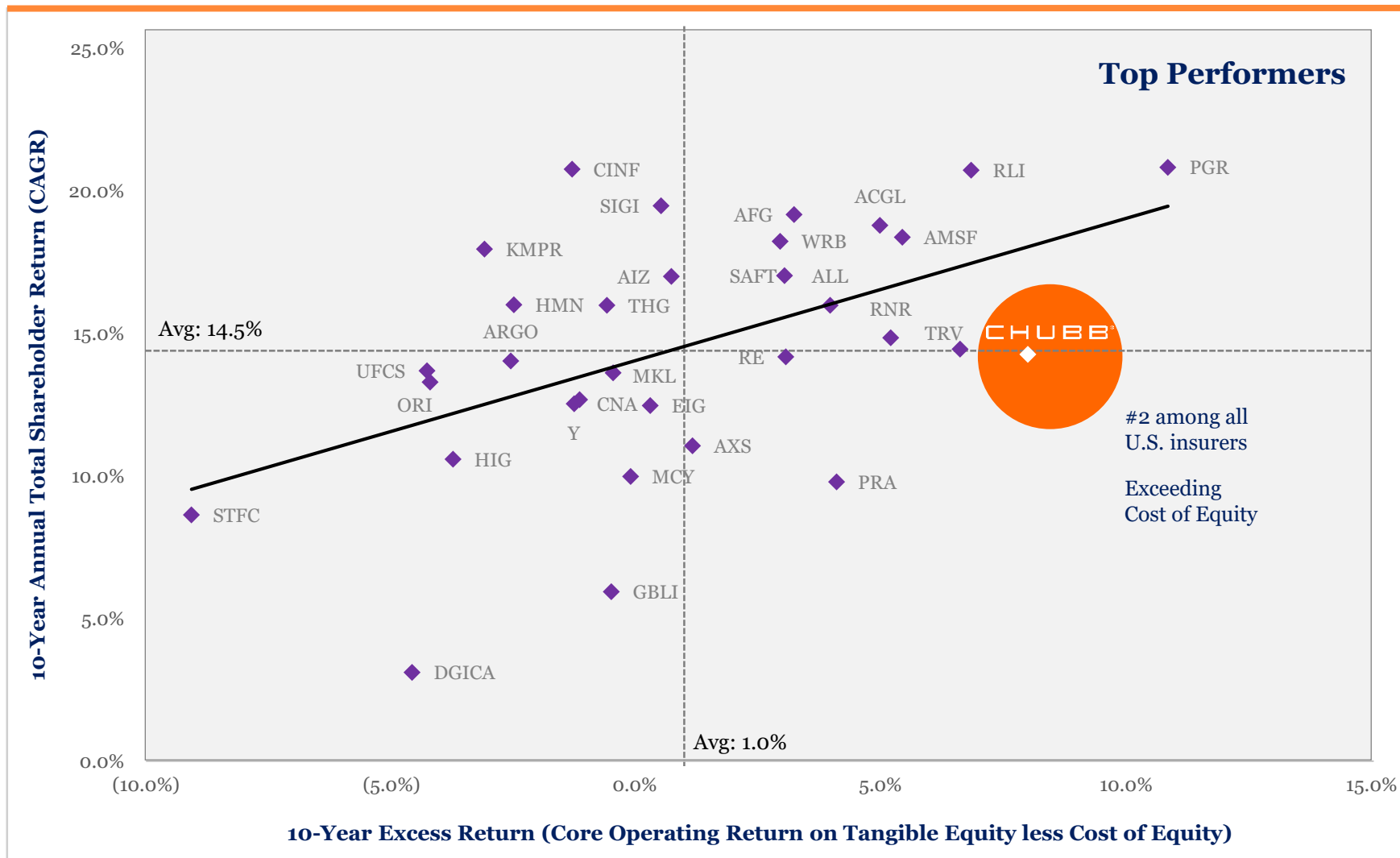
Outperformance Since Merger

3 Years Post Merger

TBVPS (9/16-9/19) ⁵	Avg. ROTE ('16-'18)
26%	14.3%
TRV 14%	AXA 14.2%
ZURN 1%	ALV 14.2%
ALV 0%	TRV 12.8%
CNA (1%)	HIG 8.9%
AXA (9%)	CNA 7.4%
AIG (17%)	AIG 1.9%
HIG (26%)	
	ZURN 15.5%

Top-Tier Returns on Absolute and Excess Basis

- Over the last decade, Chubb's core operating return on tangible equity is ca. 800 bps in excess of its cost of equity – second among 32 U.S. insurers
- Chubb is among the top 4 when combining both total return to shareholders and excess core operating return on tangible equity



Source: S&P Global, Capital IQ

Cost of equity calculated as risk free rate (10-year Treasury yield, range of 1.8% to 3.3%) + equity risk premium (6.0%) x Barra predicted beta

Excess return from 2009 through 2018; total shareholder return from 9/30/09 – 9/30/19

Selected data not available for Y (2009-2011), EIG (2009-2010) and ARGO (2010)

Underwriting company = superior results and capabilities

- Global presence and scale
- Well diversified
- Strong balance sheet and earning power
- Culture that emphasizes discipline, speed, execution excellence and quality
- Clear strategy
- Recognized and admired brand
- Ambition – patient with strategy, impatient with execution

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December 2019

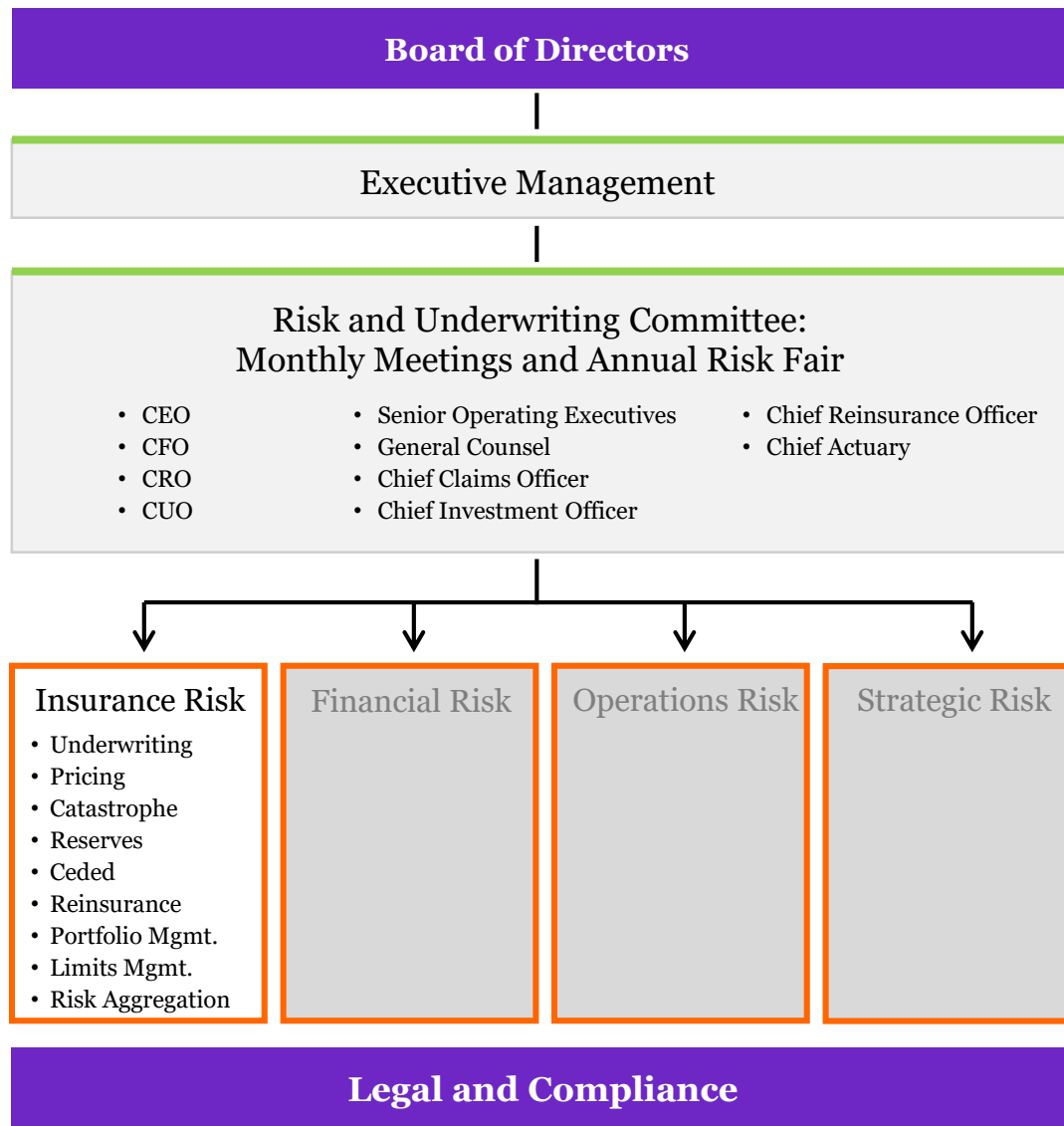
John Keogh

*Executive Vice Chairman, Chubb Group
Chief Operating Officer*

Senior Management and Risk Management: “We Own It”

Managing Risk at Chubb

- Starts at the top: management determines and sets risk tolerance and appetite
- Senior management all experienced underwriters
- Rigorous risk management process and governance provides checks and balances
- Good management information supported by data and analytics
 - Granular by country, line of business and portfolio
- Continuously refined and enhanced with portfolio reviews
- Operationalizing an underwriting culture
 - Command and control matrix management – product and geographic accountability
 - Flat organization with short lines of communication; senior leadership is on the ground meeting with local management
 - Disciplined – making sure we get paid adequately for exposure we take
 - Underwriting guidelines enforced from management down to the individual desk underwriter



Current Loss Environment: Explained Simply

- Rates have not kept pace with loss costs, pressuring margins and reserves in certain classes
- The market is now responding with firming conditions
- Liability losses can be divided into three “buckets”

Bucket 1 Attritional Loss Layers

- Severity has been increasing at a modest pace
- Frequency has been steady (with certain exceptions)

Bucket 2 Excess Layers

- Frequency of large claim settlements has been increasing, putting pressure on rate adequacy
- A consequence of so-called social inflation (increased litigation, plaintiff-friendly decisions, larger jury awards, evolving societal attitudes)
- Attachment points not moving for years
 - \$1 million attachment point for casualty excess 10 years ago is worth fraction of the amount today

Bucket 3 Class Action Litigation

- Class actions/mass actions increasing in certain areas
 - Large to mega
 - Complex, multi-party, multi-jurisdiction
 - Broad range – securities, anti-trust and science-based
 - Rise of casualty CAT-type events, e.g., molestation-related reviver statutes

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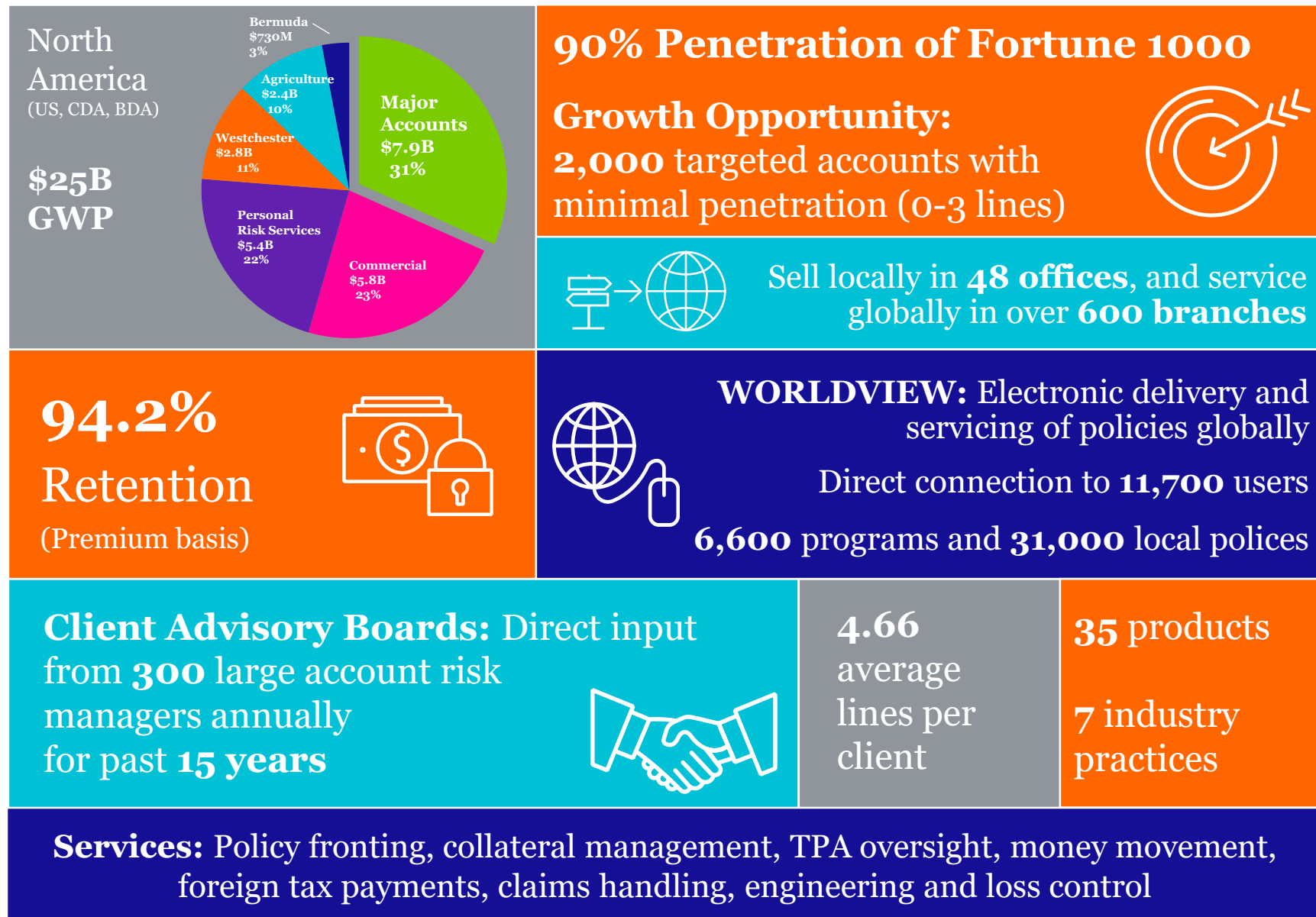
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John Lupica

Vice Chairman, Chubb Group

*President, North America Major Accounts and
Specialty Insurance*

Major Accounts: Leading Insurer for Large and Multinational Companies



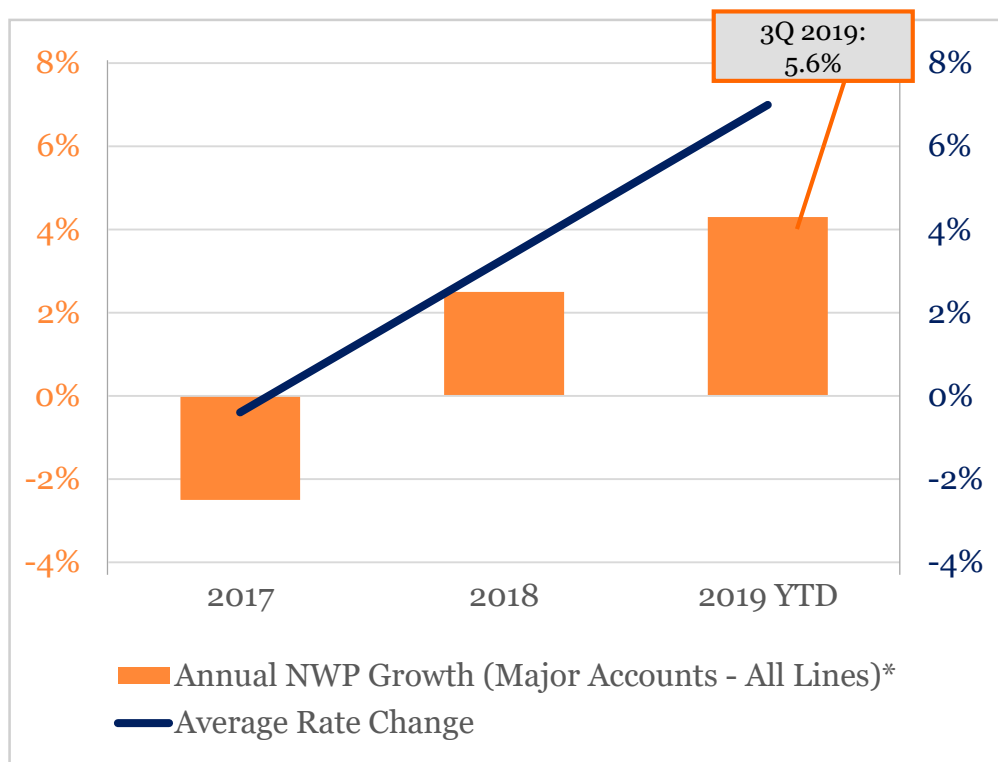
Major Accounts: Leading Insurer for Large and Multinational Companies

Well Positioned to Benefit from Both Secular and Cyclical Growth

A distinct quality and service advantage sets Chubb apart as a carrier of choice in the large corporate segment and provides significant secular growth opportunity:

- A broad set of products and services, coupled with consistent capacity, are deployed globally to serve large, complex risks
- Chubb's technology and service excellence is a key differentiator in managing and retaining large-account risk management programs
- Services delivered through dedicated Global Client and Global Claims Executives

With rates and terms firming across many classes of business, Chubb is now benefitting from cyclical growth opportunity and a flight to quality

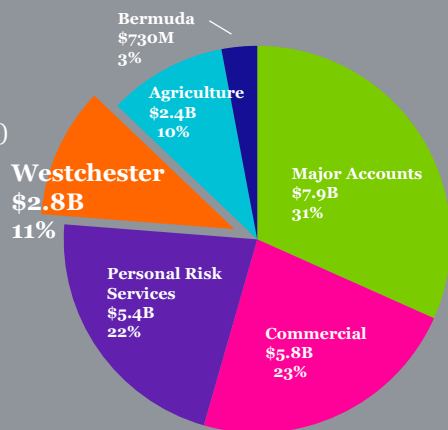


*Excludes large structured transactions; with structured transactions NWP growth is -1.1% for 2017, 6.3% for 2018 and 4.6% for 2019 YTD

Westchester: Serving the E&S Specialty Market

North America
(US, CDA, BDA)

\$25B
GWP



3 Divisions
Brokerage
Binding &
Programs

180,000+ policies
written annually



310 underwriters in
19 branch offices



600,000
submissions annually



80+
brokerage product offerings



400+ broker partners with
1,800+ locations

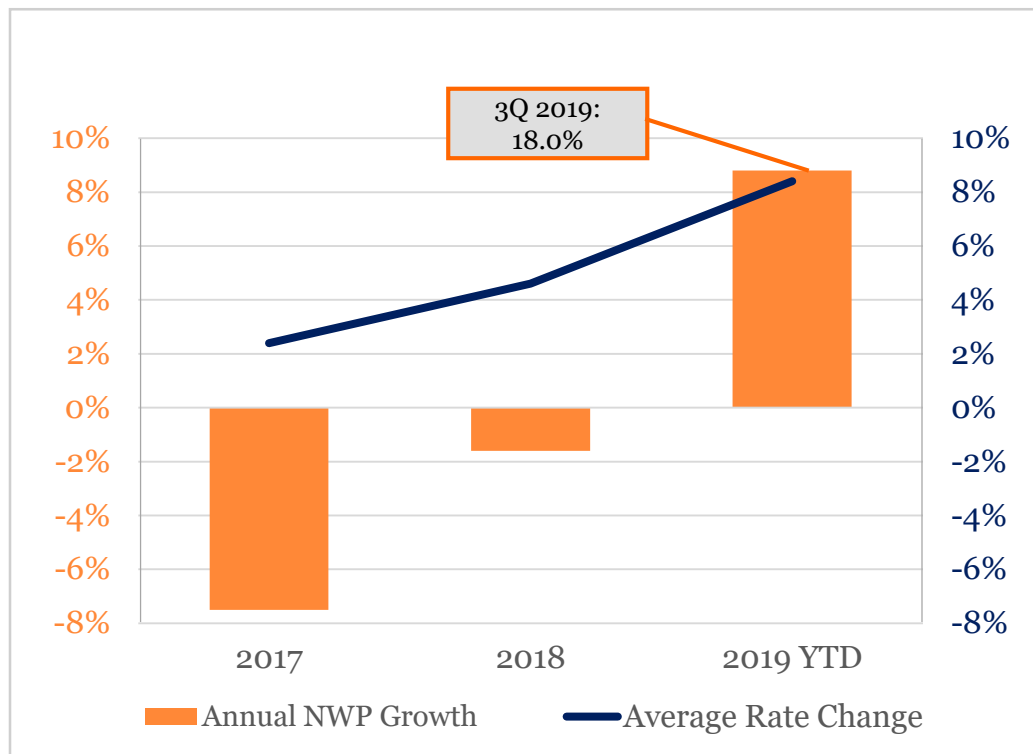
160,000+ customers
micro to global



Well Positioned to Benefit from Cyclical Growth

The powerful combination of a broad product set, digital platforms and an extensive regional footprint enable Westchester to expand rapidly when pricing corrections occur in the P&C cycle

- Rates firming across many classes of business
- Exclusive wholesale distribution along with the stability and depth of leadership and product teams create loyalty
- Technology investments enable direct connections to broker systems and efficient processing of elevated submission activity.



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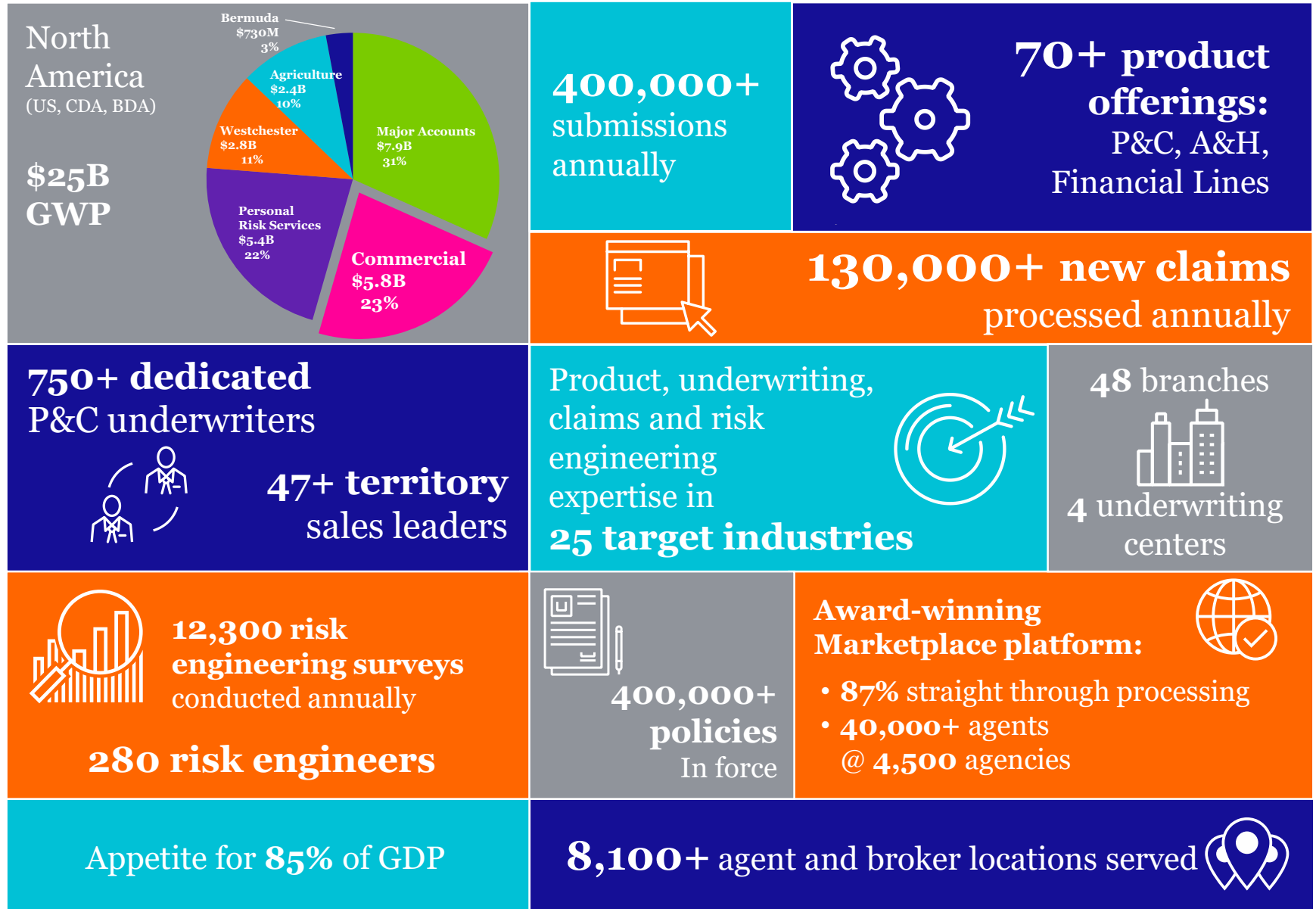
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Paul Krump

Executive Vice President, Chubb Group

*President, North America Commercial and Personal
Insurance*

Commercial Insurance: Serving Middle Market and Small Businesses



Commercial Insurance: The Broadest Product Offering of Any Company

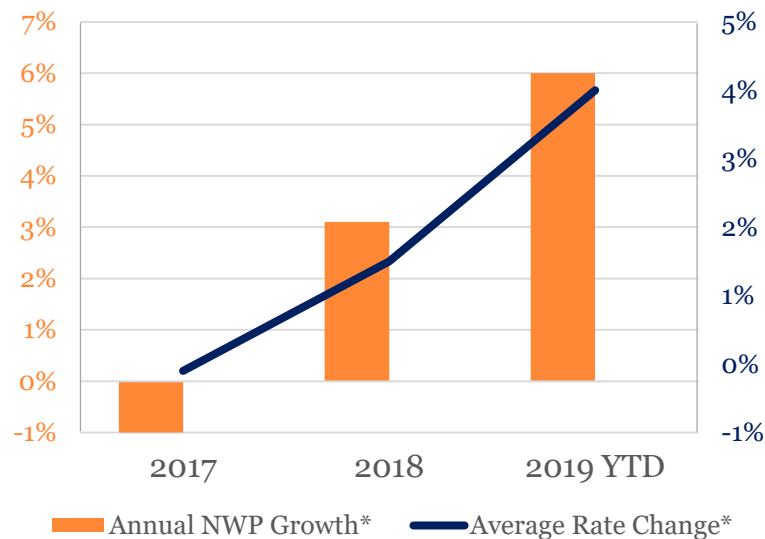
Commercial Insurance

- Chubb's advantages enable cyclical growth as rates are improving across many classes of business
- Core P&C products complemented by specialty coverages along with risk engineering and claims excellence allow agents to serve more of their customers' needs
- Cross-sales of new products to existing customers comprising 40% of new revenue

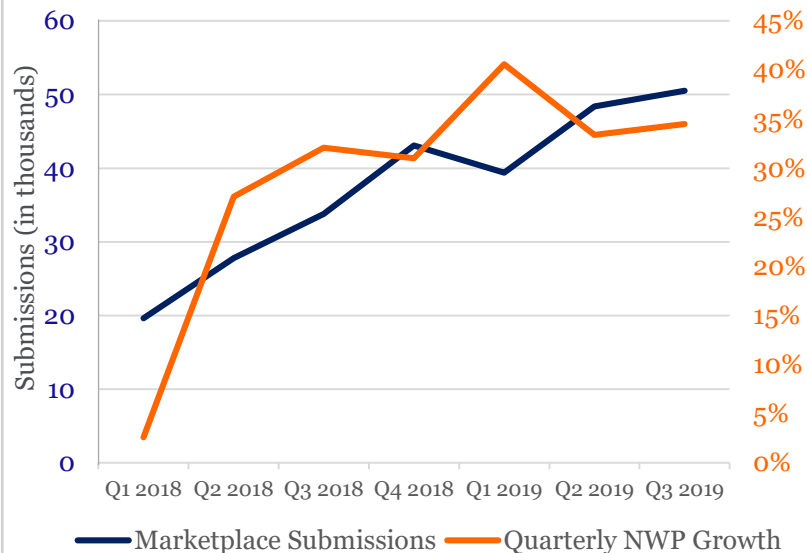
Small Business Sector

- A large segment of the U.S. economy with significant room for Chubb to expand its share
- Chubb's award-winning digital platform, Marketplace, has seen rapid adoption and growth
 - A superior agent experience, offering efficiency, ease of doing business and a low cost operating model for their small commercial business
 - Flexibility to serve agents and customers as they grow and expand into the lower middle market
 - Additional products and industry classes are added regularly

Cyclical Growth: Commercial Insurance



Secular Growth: Small Business



*Excludes workers' compensation

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Juan Luis Ortega

*Executive Vice President, Chubb Group
President, Overseas General Insurance*

Overseas General Insurance

GWP:
\$11.1B



51 countries/territories
outside North America

450+ offices



Distribution:

- **23,000+** independent agents/brokers
- **150** partnerships/affinity groups
- Bancassurance
- Direct marketing

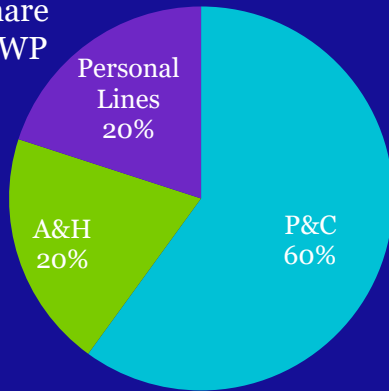


4 new strategic distribution partnerships provide access to **62 million** customers primarily through digital channels

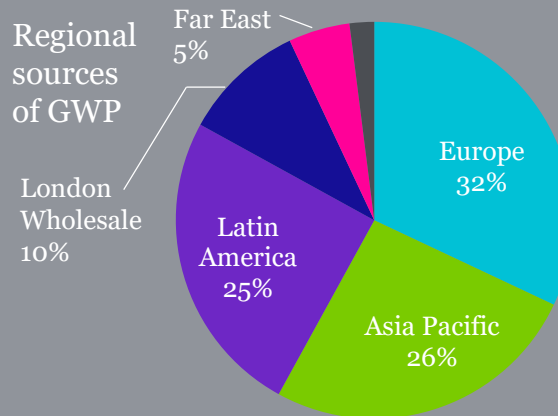
China

- Fully licensed, 100% Chubb-owned subsidiary
- Growing ownership stake in Huatai Group

% share of GWP



Regional sources of GWP



100+
products



3,000+ claims force



Retail Commercial P&C coverage highlights:

- Small & middle-market P&C
- Major accounts
- Financial lines
- Specialty A&H
- Cyber

Wholesale E&S, Commercial and P&C through Lloyd's and London market



Consumer coverage highlights:

- Auto
- Residential
- Renters
- Cell phone replacement
- HNW

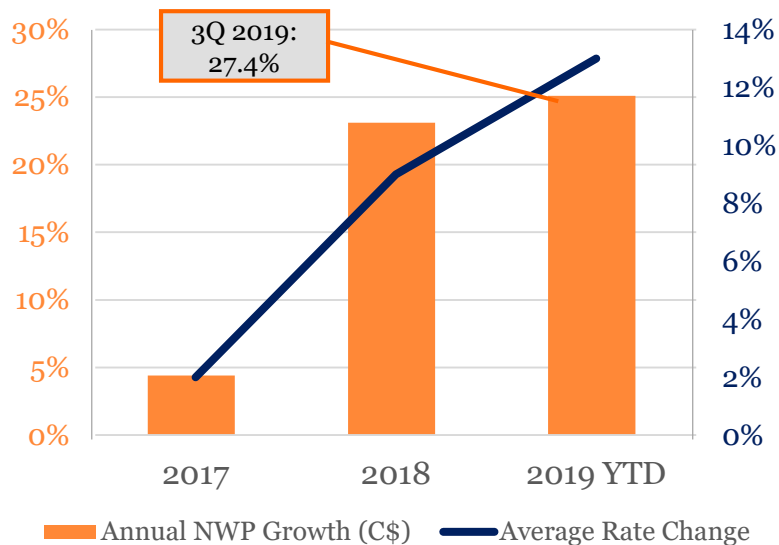


Overseas General Insurance: Examples of Cyclical Growth

Australia P&C

- Rates firming across many classes of business
- Distribution consolidation in the small and medium broker space
- Chubb's geographic, product, data analytics and technology capability is deployed quickly to capture the opportunity

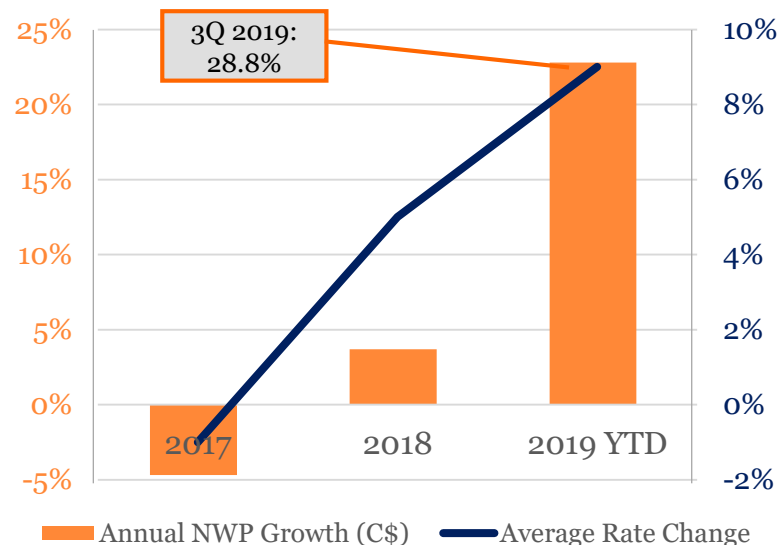
Cyclical Growth: Australia P&C



Chubb Global Markets

- Rates firming
- Capacity being withdrawn from market given poor past results
- CGM's consistent track record of underwriting discipline positions us to take advantage of a shift in market
- Momentum building and sustainable

Cyclical Growth: Chubb Global Markets



Overseas General Insurance: Secular Growth Opportunities

Asia Pacific and Latin America

- Asia Pacific and Latin America offer Chubb a number of opportunities as population and income grow
- With licenses in 54 countries and territories, Chubb has a global reach that allows us to transport best practices from one strategic distribution partnership to another, gaining access to millions of consumers
- Chubb's consumer products offer our partners and their client base a wide range of accident and health and specialty personal lines products (personal accident, hospitalization benefits, critical illness, online protection, purchase protection, handset and device insurance)
- Our digital capabilities allow us to create unique customer experiences that match our partners' digital assets

Strategic Partnerships: Asia Pacific

Leading Southeast Asian Financial Services Group

- 11 million customers
- Singapore, Hong Kong, Taiwan, Thailand and Indonesia
- Exclusive 15-year partnership for non-life products

Leading Ride-Hailing and Mobile Payments Company in Southeast Asia

- Fully digital products
- 35 million potential customers
- Leadership positions in Singapore, Malaysia, Indonesia, Thailand and Vietnam

Strategic Partnerships: Latin America

Leading Financial Group in Mexico

- Access to 12 million customers
- Exclusive 10-year partnership
- 21 products launched
- 30,000+ policies sold every month

Largest Bank Based in Chile

- Access to 2 million customers
- Digital, branch and remote channel sales
- Exclusive 15-year partnership
- A&H, personal lines, small commercial, life
- \$400 million in insurance sales with multiple carriers in 2018 to be consolidated with Chubb

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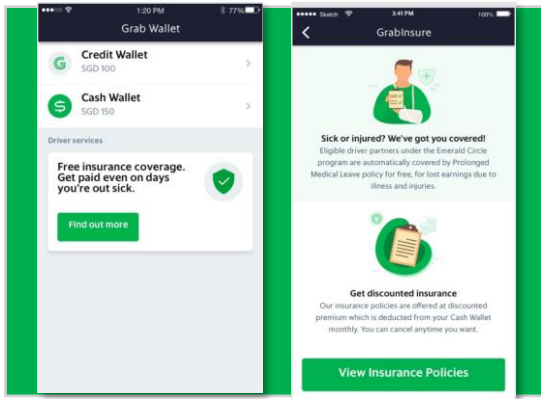
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Sean Ringsted

*Executive Vice President, Chubb Group
Chief Risk Officer and Chief Digital Officer*

Chubb Digital in Motion: Enabling a Best-in-Class Experience

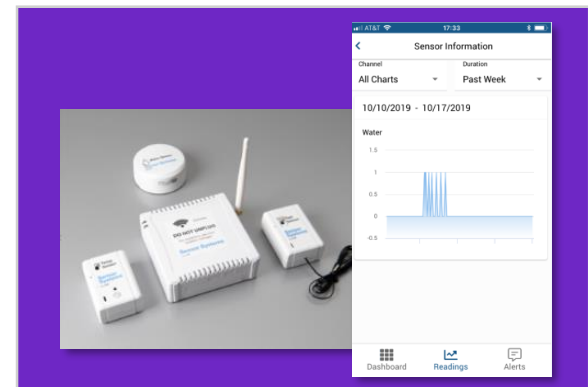
Customer Experience *Digital Channel*



Underwriting *North America Small Commercial*



Risk Management *North America Commercial & Personal Risk Services*



Claims as the Product

- Need to sell, service and pay claims digitally
 - Insurance wallet
 - Claims through app
- High volume and low policy cost
- Expands our distribution and creates claim handling efficiency

Example:

- Pre-filled claim
- Drivers confirm contact details and claim type

Two-Question Underwriting

- Ease of use for customers and underwriters
- Drives superior risk selection
- Leverages internal/external data to:
 - Quote in <3 min
 - Predict risk classification
 - Eliminate underwriting questions

Example:

- Hardware store
- Fills propane, provides repairs
- Located in single-story building

Predict & Prevent

- Wine collections and commercial complex facilities
- Monitor temp, water and humidity
- Sensors live; alerts generated – adding risk management value
- Avoids disruption of repair/replace

Example:

- In 2018, roof hatch issue resulted in \$4 million claim
- On 10/12/2019 alert prevented similar loss in same building

Explanatory Note

This document and the remarks made during the presentation today may contain forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995. Words such as “believe,” “anticipate,” “estimate,” “project,” “should,” “plan,” “expect,” “intend,” “hope,” “feel,” “foresee,” “will likely result,” or “will continue,” and similar expressions, may identify forward-looking statements which may include statements related to Company performance including 2019 performance, growth opportunities, strategic initiatives (including digital), pricing and business mix, investments and acquisitions, and economic and insurance market conditions including foreign exchange. Such statements involve risks and uncertainties that could cause actual results to differ materially, including, without limitation, the following: competition, pricing and policy term trends, the levels of new and renewal business achieved, the frequency of unpredictable catastrophic events, actual loss experience, uncertainties in the reserving or settlement process, integration activities and performance of acquired companies, loss of key employees or disruptions to our operations, new theories of liability, judicial, legislative, regulatory and other governmental developments, litigation tactics and developments, investigation developments and actual settlement terms, the amount and timing of reinsurance recoverable, credit developments among reinsurers, rating agency action, possible terrorism or the outbreak and effects of war, economic, political, regulatory, insurance and reinsurance business conditions, potential strategic opportunities including acquisitions and our ability to achieve and integrate them, as well as management’s response to these factors, and other factors identified in our filings with the Securities and Exchange Commission. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date on which they are made. The Company undertakes no obligation to publicly update or review any forward-looking statements, whether as a result of new information, future events, or otherwise.

This document and the remarks made during the presentation today may also contain non-GAAP financial measures. Reconciliations of these non-GAAP financial measures to the most direct comparable GAAP measures and related information are provided in our most recent quarterly earnings press release and financial supplement, which are available on the Investor Relations section of our website at investors.chubb.com, and in the pages that follow in this presentation.

Regulation G - Non-GAAP Financial Measures

(in millions of U.S. dollars except ratios and share data)

The following non-GAAP financial measures, which may be defined differently by other companies, are important for an understanding of our overall results of operations and financial condition. However, they should not be viewed as a substitute for measures determined in accordance with generally accepted accounting principles (GAAP).

Core Operating Income

Core operating income, net of tax, excludes from net income, the after-tax impact of adjusted net realized gains (losses), Chubb integration expenses, and the amortization of fair value adjustment of acquired invested assets and long-term debt related to the Chubb Corp acquisition. We believe this presentation enhances the understanding of our results of operations by highlighting the underlying profitability of our insurance business. Adjusted net realized gains (losses) includes net realized gains (losses) and net realized gains (losses) recorded in other income (expense) related to unconsolidated subsidiaries, and excludes realized gains and losses on crop derivatives. These derivatives were purchased to provide economic benefit, in a manner similar to reinsurance protection, in the event that a significant decline in commodity pricing impacts underwriting results. We view gains and losses on these derivatives as part of the results of our underwriting operations, and therefore realized gains (losses) from these derivatives are reclassified to adjusted losses and loss expenses. We exclude adjusted net realized gains (losses) because the amount of these gains (losses) are heavily influenced by, and fluctuate in part according to the availability of market opportunities. We exclude the amortization of the fair value adjustments related to purchased invested assets and long-term debt and Chubb integration expenses due to the size and complexity of this acquisition. These integration expenses are distortive to our results and are not indicative of our underlying profitability. We believe that excluding these integration expenses facilitates the comparison of our financial results to our historical operating results. References to core operating income measures mean net of tax, whether or not noted.

The following table presents the reconciliation of Net income to Core operating income:

	Q3 YTD 2019	Q3 YTD 2018	% Change
Net income, as reported	\$ 3,281	\$ 3,607	
Amortization of fair value adjustment of acquired invested assets and long-term debt, pre-tax	(111)	(165)	
Tax benefit on amortization adjustment	22	32	
Chubb integration expenses, pre-tax	(9)	(39)	
Tax benefit on Chubb integration expenses	2	7	
Adjusted net realized gains (losses), pre-tax	(211)	325	
Tax expense on adjusted net realized gains (losses)	<u>(13)</u>	<u>(25)</u>	
Core operating income	<u>\$ 3,601</u>	<u>\$ 3,472</u>	3.7%
Denominator	459,924,586	468,004,524	
Diluted earnings per share			
Net income	\$ 7.13	\$ 7.71	
Amortization of fair value adjustment of acquired invested assets and long-term debt, net of tax	(0.19)	(0.29)	
Chubb integration expenses, net of tax	(0.02)	(0.07)	
Adjusted net realized gains (losses), net of tax	<u>(0.49)</u>	<u>0.65</u>	
Core operating income per share	<u>\$ 7.83</u>	<u>\$ 7.42</u>	5.5%

Regulation G - Non-GAAP Financial Measures (continued)

(in millions of U.S. dollars except ratios and share data)

Core operating ROE and Core operating ROTE

Core operating return on equity (ROE) and Core operating return on tangible equity (ROTE) are annualized non-GAAP financial measures. The numerator includes core operating income, net of tax. The denominator includes the average shareholders' equity for the period adjusted to exclude unrealized gains (losses) on investments, net of tax. For the ROTE calculation, the denominator is also adjusted to exclude goodwill and other intangible assets, net of tax. These measures enhances the understanding of the return on shareholders' equity by highlighting the underlying profitability relative to shareholders' equity and tangible equity excluding the effect of unrealized gains and losses on our investments.

	Q3 YTD 2019	Q3 YTD 2018
Net income	\$ 3,281	\$ 3,607
Core operating income	\$ 3,601	\$ 3,472
Equity - beginning of period, as reported ⁽¹⁾	\$ 50,300	\$ 51,172
Less: unrealized gains (losses) on investments, net of deferred tax	<u>(545)</u>	<u>1,033</u>
Equity - beginning of period, as adjusted	\$ 50,845	\$ 50,139
Less: goodwill and other intangible assets, net of tax	\$ 20,054	\$ 20,621
Equity - beginning of period, as adjusted ex goodwill and other intangible assets	<u>\$ 30,791</u>	<u>\$ 29,518</u>
Equity - end of period, as reported	\$ 54,572	\$ 50,934
Less: unrealized gains (losses) on investments, net of deferred tax	<u>2,613</u>	<u>(549)</u>
Equity - end of period, as adjusted	\$ 51,959	\$ 51,483
Less: goodwill and other intangible assets, net of tax	\$ 20,010	\$ 20,121
Equity - end of period, as adjusted ex goodwill and other intangible assets	<u>\$ 31,949</u>	<u>\$ 31,362</u>
Weighted average equity, as reported	\$ 52,436	\$ 51,053
Weighted average equity, as adjusted	\$ 51,402	\$ 50,811
Weighted average equity, as adjusted ex goodwill and other intangible assets	\$ 31,370	\$ 30,440
ROE	8.3%	9.4%
Core operating ROE	9.3%	9.1%
Core operating ROTE	15.3%	15.2%

(1) January 1, 2019 included a \$12 million after-tax reduction to beginning equity related to the adoption of new accounting guidance on premium amortization of purchased callable debt securities.

Regulation G - Non-GAAP Financial Measures (continued)

(in millions of U.S. dollars except ratios and share data)

Reconciliation of Book Value and Tangible Book Value per Share

Book value per common share, is shareholders' equity divided by the shares outstanding. Tangible book value per common share, is shareholders' equity less goodwill and other intangible assets, net of tax, divided by the shares outstanding. We believe that goodwill and other intangible assets are not indicative of our underlying insurance results or trends and make book value comparisons to less acquisitive peer companies less meaningful.

	Sept. 30 2019	Sept. 30 2018	% Change
Book value	\$ 54,572	\$ 50,934	
Less: goodwill and other intangible assets, net of tax	<u>20,010</u>	<u>20,121</u>	
Tangible book value	\$ 34,562	\$ 30,813	
Denominator	<u>453,533,642</u>	<u>461,100,790</u>	
Book value per share	\$ 120.33	\$ 110.46	8.9%
Tangible book value per share	\$ 76.21	\$ 66.83	14.0%

CAY P&C combined ratio excluding catastrophe losses

CAY P&C combined ratio excluding catastrophe losses (Cats) excludes Cats and prior period development (PPD) from the P&C combined ratio. We exclude Cats as they are not predictable as to timing and amount and PPD as these unexpected loss developments on historical reserves are not indicative of our current underwriting performance. The combined ratio numerator is adjusted to exclude Cats, net premiums earned adjustments on PPD, prior period expense adjustments and reinstatement premiums on PPD, and the denominator is adjusted to exclude net premiums earned adjustments on PPD and reinstatement premiums on Cats and PPD. In periods where there are adjustments on loss sensitive policies, these adjustments are excluded from PPD and net premiums earned when calculating the ratios. We believe this measure provides a better evaluation of our underwriting performance and enhances the understanding of the trends in our P&C business that may be obscured by these items. This measure is commonly reported among our peer companies and allows for a better comparison.

	Q3 YTD 2019	Q3 YTD 2018
P&C combined ratio	89.9%	89.8%
Less: Catastrophe losses	3.5%	5.0%
Less: Prior period development	<u>-2.6%</u>	<u>-3.2%</u>
CAY P&C combined ratio excluding Cats	<u>89.0%</u>	<u>88.0%</u>