

## Insurance Industry Deep Dive Insuring We Understand

Insurance is the second largest subsector in FIG's Canadian index, making it a crucial industry to understand. Known for its sensitivity to macroeconomic factors, insurance can be a difficult industry in which to be invested. Currently, FIG holds one insurance company: Manulife Financial. Since inception, Manulife has returned over 7%, compared to its peers Sunlife Financial, which returned over 25%, and Great-West Life, which returned (2%).

In a rising rate environment and with changing dynamics in the industry, this report takes a deeper look at the insurance industry works. Some key takeaways include:

- I. Regulation, ageing demographics, and InsurTech are impacting the profitability and capital surplus of insurance companies
- II. Insurance companies are highly sensitive to interest rates and the equity markets
- III. Life insurance is a more attractive subsector of insurance compared to P&C based on different risk exposures

Following these takeaways, this report takes a look at Great-West Life. We believe that the insurance space is becoming more attractive in a rising rate environment and with increasingly better risk assessment tools. However, the macro-dependency of the sector makes it a challenge to identify material differences between companies in the space. Therefore, while we like business models in the industry, we cannot predict macro-effects and instead need to focus on resilient and sustainable business strategies.

The information in this document is for EDUCATIONAL and NON-COMMERCIAL use only and is not intended to constitute specific legal, accounting, financial or tax advice for any individual. In no event will QUIC, its members or directors, or Queen's University be liable to you or anyone else for any loss or damages whatsoever (including direct, indirect, special, incidental, consequential, exemplary or punitive damages) resulting from the use of this document, or reliance on the information or content found within this document. The information may not be reproduced or republished in any part without the prior written consent of QUIC and Queen's University.

QUIC is not in the business of advising or holding themselves out as being in the business of advising. Many factors may affect the applicability of any statement or comment that appear in our documents to an individual's particular circumstances.

---

### Financial Institutions

Brendan Blaikie  
bblaikie@quiconline.com

Susie Liu  
sliu@quiconline.com

Linna Li  
lli@quiconline.com

Mark Nerland  
mnerland@quiconline.com

Henry Yu  
hyu@quiconline.com

Tawfek Abdelwahed  
tabdelwahed@quiconline.com

## Table of Contents

---

Introduction to Insurance	3
Recent Industry Developments & Trends	6
Insurance Company Risk Exposure	8
Industry Outlook and Portfolio Implications	9
Great-West Life: Company Overview	10
Great-West Life: Recent Developments	12
Great-West Life: Drivers of Relative Valuation	13
References	15

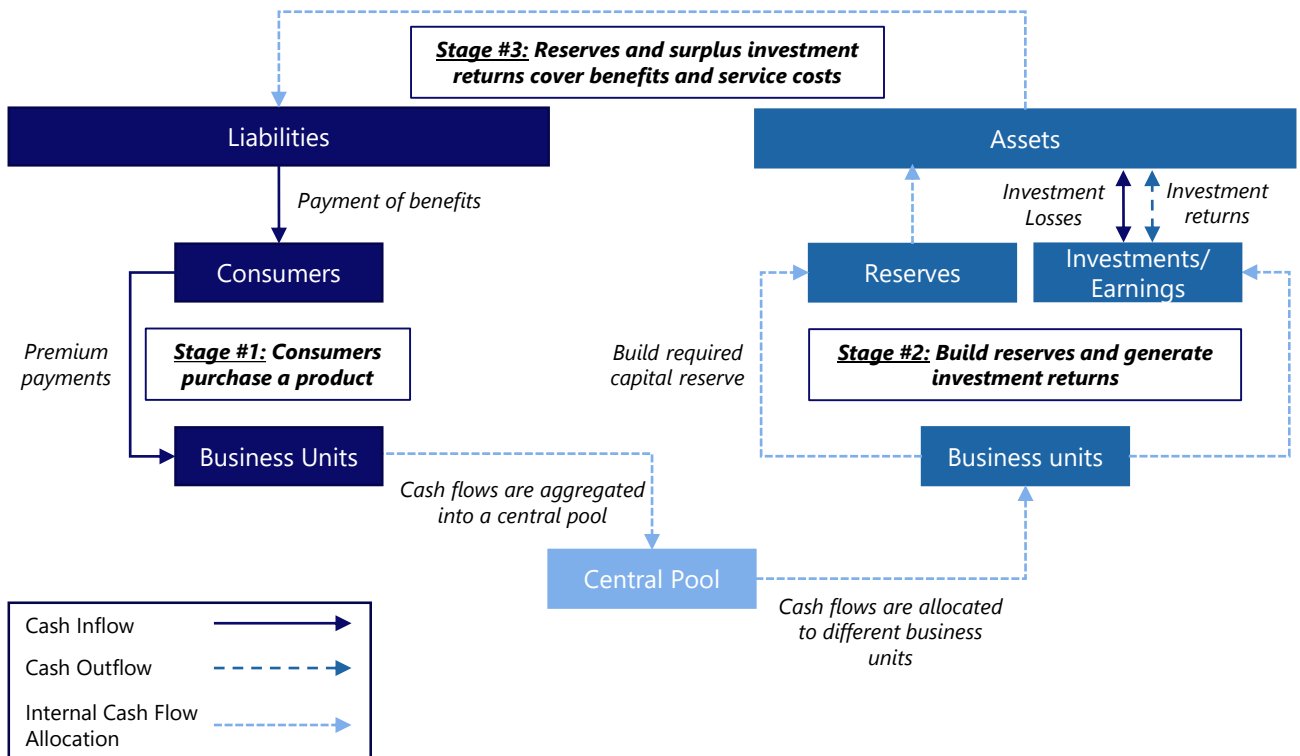
## Introduction to Insurance

Life insurance companies (lifecos) make promises to cover uncertain future liabilities in exchange for current and future cash payments. The set promise can include health benefits, death benefits, or other investment-linked benefits. Capital from cash payments is then allocated to investment business units to invest in equities and income-generating vehicles. These invested assets are used to amplify returns and earn higher spreads on contracts. Since capital is invested in public equities and fixed income vehicles, lifeco's performance can be highly tied to the success of equity markets. Though it invests capital, lifecos are liability-driven entities, as they must

maintain minimum asset reserves to meet their future obligations to customers. Actuarial reserves dictate the value of the liabilities and consequently the required reserves. Historically, lifecos have only offered protection products; however, in the last 20 years they have gravitated to offer a diverse range of products that are focused on wealth management. Protection products are based on the exchange of a promise and payment, whereas the emergence of wealth management products such as mutual funds, group savings, and segregated funds are based on fees. As a result, modern lifeco business models have emerged to reflect a more typical financial services company.

### EXHIBIT I

Lifeco Business Model and Cash Flow Movements



## Introduction to Insurance Cont'd

### Product Types Underpinning Cash Flows

**Individual Life and Health Insurance:** Life insurance contracts are the most traditional protection product type. A life insurance contract is made up of a policyholder, an insurer, and a beneficiary. An insurer takes on an obligation to pay a benefit to a beneficiary in exchange for regular premium payments by a policyholder. The premium paid represents the risk of the policyholder and the related obligation. Since 1995, Canadian individual life insurance has grown at an annual rate of 4.6%, well above the U.S. growth rate of 1.7%.

**Individual Wealth:** In recent years, the individual wealth product category has become synonymous with annuities, as the contract holder receives a consistent interest over the term or until death. Individual wealth contracts can be structured with fixed or variable rates. Fixed rate contracts merely provide a consistent stream of cash flow from savings, whereas variable rates act similarly to segregated funds. Variable rate holders generate returns like a mutual fund but with a guaranteed payout rate and significant tax advantages. Lifecos leverage this product category to generate capital to invest in equities, earning a spread over the interest paid to the contract holder.

**Group Insurance/Retirement Plans:** Group contracts offer insurance to a pool of people under one master contract. This product type is preferred by employers who provide benefit plans to cover employees. As a

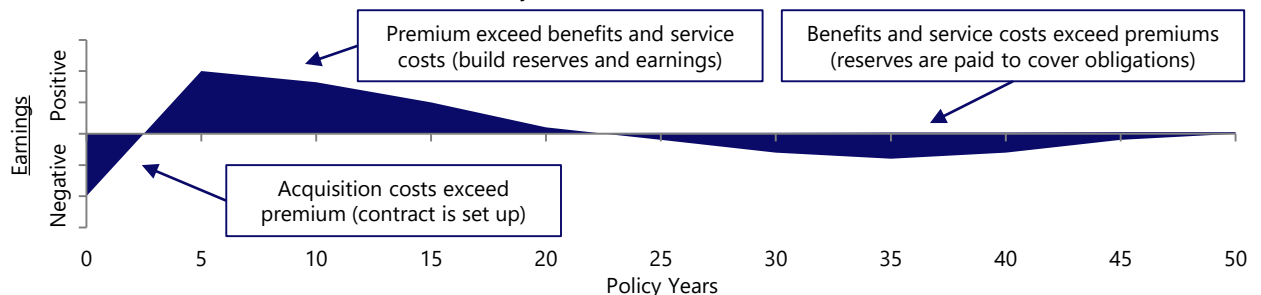
result, the employer is the universal policyholder, in contrast to individual life products where everyone is their policyholder. Similar to group insurance product types, group retirement products are also issued to employers to act as a savings or investment platform. Group retirement contracts are often bundled with other products. One differentiating factor of group retirement plans is that they are commonly held off balance sheet.

**Mutual Funds:** One of the fastest growing product types and relatively new to lifeco business models, mutual funds offer lifecos additional investment capital with lower capital requirements when compared to life insurance products. Investment risk is born by customers, and lifecos generate fees. Mutual funds are often synergistic, as lifecos already had established investment platforms, and added scale creates economies of scale, as the majority of mutual fund costs are fixed.

Lumpy product cash inflows and outflows dictate a lifeco's earnings. Cash inflows are derived from reoccurring premiums, fees, reinsurance payments, and investment returns. In a rising rate environment, lifecos are able to increase margins on variable annuities and the yields generated on fixed income investments. Cash outflows are generally attributable to benefit payouts, policyholder dividends, operating expenses, and taxes.

### EXHIBIT II

Cash Flows Over an Insurance Contracts Life Cycle



Source(s): RBC Capital Markets

## Introduction to Insurance Cont'd

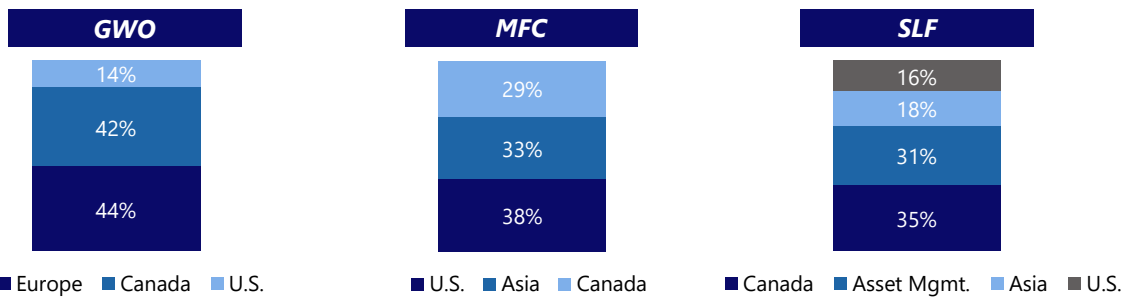
### Market Players

The Canadian life insurance market is dominated by the four lifecos: Great-West Lifeco Inc (GWO), Manulife Financial Corp. (MFC), and Sun Life Financial Inc. (SLF) and Industrial Alliance (IAG). The former three are considered Canada's Big Three lifecos. The firms predominantly differ based on product types and geography. GWO operations are concentrated in Canada, the U.S., and Europe. Its product offerings focus on national life and health insurance in the group retirement and savings markets. In contrast, MFC is

diversified internationally with a substantial presence in Asia, prioritizing financial protection and wealth management products. Similar to MFC, SLF, is globally diversified, with its earnings being deriving from core group insurance and mutual funds in the U.S. and a diversified product mix in Canada and Asia. As a group, the Big Three lifecos derive between 50-70% of earnings outside of Canada. Within the FIG portfolio, we hold MFC, and throughout the report, we will be evaluating both our conviction in the industry and one of MFC's peers, GWO.

### EXHIBIT III

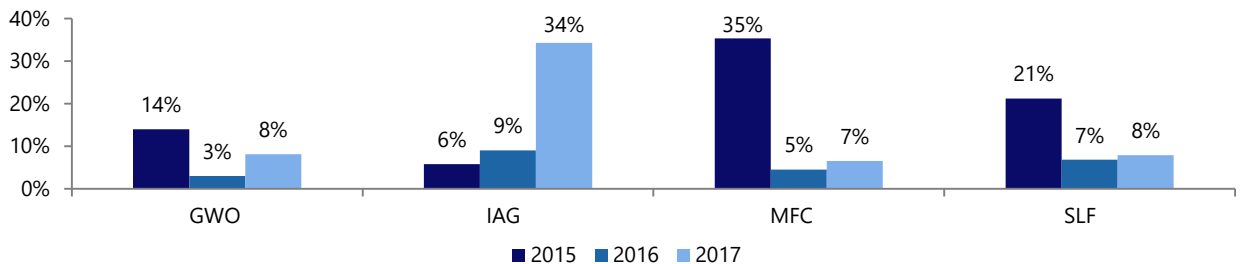
Earnings Breakdown by Geography (Q2/18)



Source(s): RBC Capital Markets, Company Reports

### EXHIBIT IV

YoY AUM and AUA Growth



Source(s): RBC Capital Markets, Company Reports

## Recent Industry Developments & Trends

### Recent Regulation Changes

In recent years Canadian lifecos have undergone a number of regulatory changes. On January 1, 2018, lifeco capital requirement regulation changed from the Minimum Continuing Capital and Surplus Requirements (MCCSR) structure to the Life Insurance Capital Adequacy Test (LICAT), changing the way capital requirements are benchmarked and capital ratios are calculated. The transition to LICAT framework moved the insurance industry from a factor-based system to a risk-based system. More specifically, when calculating the numerator of lifeco's total and core ratios, the LICAT framework includes a

surplus allowance and eligible deposits. The additional surplus accounts for insurance provisions and interest rate risks, and the eligible deposits include excess deposits from unregistered clients and claims fluctuation reserves. Adjustments within the numerator have increased its susceptibility to interest rate changes, as the value of the numerator on the ratio must be marked-to-market. The denominator of each ratio is now dictated by a base solvency buffer, comprised of net capital requirements and a multiple scalar. Though the actual calculation of the ratios has become more risk-focused and comprehensive, the overall minimum required ratios decreased.

### EXHIBIT V

#### New Capital Requirement Framework

	MCCSR (Previous)	LICAT (New)
<i>Ratio Calculation:</i>		
Total Ratio	$\frac{\text{Available Capital}}{\text{Required Capital}}$	$\frac{\text{Available Capital} + \text{Surplus Allowance} + \text{Eligible Deposits}}{\text{Base Solvency Buffer}^{(1)}}$
Tier 1/Core Ratio	$\frac{\text{Tier 1 Available Capital}}{\text{Base Required Capital}}$	$\frac{\text{Tier 1 Capital} + 70\% \text{ of Surplus Allowance} + 70\% \text{ of Eligible Deposits}}{\text{Base Solvency Buffer}^{(1)}}$
<i>Target Ratios<sup>(2)</sup>:</i>		
Total Ratio	150%	100%
Tier 1/Core Ratio	105%	70%
<i>Minimum Ratios:</i>		
Total Ratio	120%	90%
Tier 1/Core Ratio	60%	55% <sup>(3)</sup>

<sup>(1)</sup> Aggregate capital requirements net of credits, multiplied by scalar (currently set as 1.05)

<sup>(2)</sup> Supervisory Targets are not applicable to regulated insurance holding companies and non-operating insurance companies

<sup>(3)</sup> Regulated insurance holding and non-operating companies are required to maintain a min Core Ratio of 50%

**LICAT establishes a more comprehensive capital requirement framework, incorporating a lifeco's total balance sheet, risk profile, and economic environment**

## Recent Industry Developments & Trends Cont'd

### Aging Population

A highly anticipated demographic trend underpinning the future growth of lifecos is the aging baby boomer population. Throughout the 1990s and early 2000s, the baby boomer cohort's capital was tied up in banks, as they were seeking higher returns from riskier investment vehicles to accumulate wealth; however, the generation is starting to exit this phase, and in turn, consumer tastes are changing. Now, baby boomers are at the stage in their life cycle where they are seeking capital protection. Lifecos are uniquely advantaged in this respect as they can bundle mutual fund returns with capital protection plans like individual health or life insurance products. Similarly, lifecos will benefit from the longer life spans within this demographic, as it will increase the duration of premium payments and the cash flows per contract. In turn, it will provide the lifeco with more investible capital and more time to generate returns before benefits need to be paid. As the duration of contracts increase, it will challenge lifecos to more accurately design and price in assumptions that often dictate the value of policies.

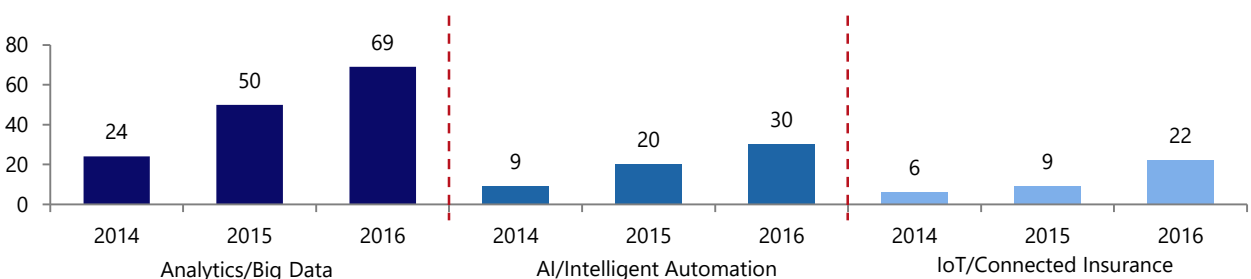
### InsureTech

Many industries have undergone disruption from financial technology innovations, and life insurance is

no exception. The rise of insurance technology (InsurTech) has become a prominent factor in many lifecos and is reshaping product development, claims management, and underwriting processes with greater efficiency. SLF and MFC are leading the charge in InsurTech with both companies setting up an InsurTech platform in 2016. SLF partnered with MaRS Discovery District to promote digital innovation, and as a result, it released the first insurance-specific mobile application. It was further complemented by the introduction of a digital assistant that aids SLF utilize its benefits and pension plans. To compete, MFC launched a Lab of Forward Thinking in Singapore, Boston, and Toronto. Out of this platform, MFC has introduced blockchain technology to improve the onboarding process of wealth management customers. To manage this new division, MFC rolled out new executive positions of Chief Analytics Officer and Chief Innovation Officer. As InsurTech continues to substantiate itself within the industry, it is anticipated that it will bring efficiency gains to the firm and potential margin expansion.

### EXHIBIT VI

Increasing Number of InsurTech-Based Transactions



Source(s): Company filings, Accenture, RBC Capital Markets

## Insurance Company Risk Exposure

The success of insurance companies depends on their ability to accurately assess and price risk. This means that understanding the risks faced by insurance companies, and the measures they have in place to address these risks, is crucial to any analysis.

### Interest Rate Risk

Insurance companies match the risks of the products they have sold to customers, which are essentially liabilities on their balance sheet, to the investments they make. This is the primary method insurance companies have of balancing their assets against their liabilities. Therefore, insurance companies have material exposure to interest rates.

The exposure to interest rates comes not from the actual changes in the returns of investments, but from the difference in duration between assets and liabilities. Typically, the duration of the liabilities exceeds the duration of the assets. For example, a long-term life insurance policy would usually last longer than investments that the insurance company would hold against that liability. This means that rising interest rates are beneficial to companies and falling rates can be detrimental.

Interest rates also impact the value of the liabilities when they are marked-to-market. This means that when interest rates rise, the value of liabilities decreases, consequently decreasing the amount of reserves companies are required to hold. Companies can then invest more capital.

### Equity Market Risk

Following the concept of risk-matching assets and liabilities, insurance companies often invest in equities to cover the risk of their variable annuities. Movements in equity markets have an impact on the fees earned in variable annuities, mutual funds, group benefits, and, in some cases, universal life businesses. Furthermore, equity market movements also affect reserves for variable annuity guarantees. The gains and losses on

equities also have an impact on investments that back policyholder liabilities and surplus capital. Overall, equity markets have a large influence on the capital and earnings of insurance companies as equity market volatility affect various costs associated with variable annuity guarantees.

### Credit Cycles

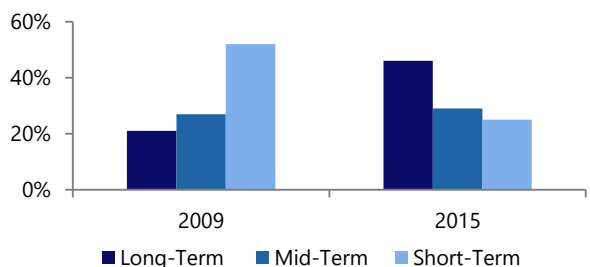
One of the biggest drivers of insurance company fundamentals is credit quality. Investment-related problems have had major impacts on insurance companies in the past. For example, Confederation Life, a Toronto-based lifeco, was forced into liquidation in the mid-1990s due to the poor performance of commercial mortgages. Credit risk for insurance companies is associated with a variety of situations, including the credit quality of fixed income portfolios and exposure to risky assets.

### Policyholder Behaviour Risk

Policyholder behaviour risk refers to the impact policyholders can have on the liability. Choices such as withdrawal/lapse, level of premiums paid into a flexible premium product, and the exercise of options of available can all increase or decrease how risky policyholders are to insurance companies. Understanding the behaviour of customers once they are policyholders is important to both company profitability as well as industry regulations.

#### EXHIBIT VII

IAG: Shifting Corporate Bond Portfolio Durations



Source(s): RBC Capital Markets



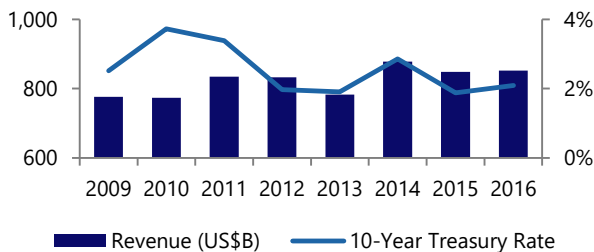
## Industry Outlook and Portfolio Implications

### Opportunities in the Industry

A rising interest rate environment combined with the fact that companies are trading below their 10-year historical average multiples indicates a potential opportunity to enter the industry. In a higher interest rate environment, companies tend to release reserves as a result of higher IRR assumptions. Hedging costs would also likely decline and profits would increase due to higher fee income and higher margins. Lastly, there would be higher earnings on surplus due to companies investing in higher-yielding assets over time.

#### EXHIBIT VIII

Comparing U.S. Life/Health Insurance Revenues and Bond Yields



Source(s): U.S. Treasury, SNL

### Challenges to Portfolio

The stock prices of Canadian insurance companies are heavily influenced by macro factors and even the equity markets. This poses a major challenge. Movements in interest rates, equity markets, credit stress, and currency can have a material impact not only on earnings, but also on reserves. Furthermore, analyzing an insurance company's liabilities is almost impossible due to a lack of transparency in the reserving process. This means that, while the conceptual effects of macro factors and the high level business models can be understood, there is still important information about company risk that is difficult to assess. Therefore, this offers two main approaches to consider when analyzing the insurance space. The first is a macro-driven approach.

While this contradicts QUIC's investment philosophy, it offers a way to analyze relatively simple macro factors and relate them to underlying business models. This can shed light on opportunities to enter specific insurance companies. On the other hand, FIG could consider a company-focused approach. Because risk is so integral to the operations of an insurance company, finding a company that has the most effective technology and resilient strategy for managing risk could point towards a potential investment opportunity.

### Key Company Characteristics

#### 1. Capital Adequacy

One of the simplest ways to assess an insurance company's exposure to risk is to analyze their capital adequacy ratios. The 2018 LICAT guidelines outline a minimum LICAT of 90%, which essentially means that the total available capital must be 0.9 times the required capital. In other words, LICAT represents the amount of capital an insurance company holds that can cover its risk, where generally a higher percentage is better.

#### 2. Contrasting Insurance Industries

In general, P&C insurance companies are not attractive to FIG for two main reasons. The first is high geographic dependency. Because different regions have different exposures to certain types of risk, the profitability of a P&C insurance company is highly dependent on the geographies in which they operate. This means that to effectively understand the risks of a P&C insurance company, it would be important to understand the risks of each unique geography. Second, P&C insurance involves greater unpredictable risk such as natural disasters. This makes it an unattractive sub-sector for the FIG portfolio. In comparison, life insurance companies have revenue mixes that allow them to benefit from macro conditions while also supplementing income through other less macro-exposed offerings like wealth management, could offer an attractive investment.

## Company Overview

### History

The earliest roots of any of the companies under Great-West Lifeco Inc. (TSX: GWO) management were set in 1847 Hamilton, Ontario by subsidiary Canada Life (then known as Canada Life Assurance Company); current Canada Life parent The Great-West Life Assurance Company began in 1891 in Winnipeg. Its second oldest company London Life was founded in 1874 and taken over by Great-West in 1997, one year after it purchased the Canadian operations of the Prudential Insurance Company of America. Since Jeffery Hall Brock founded the company in 1891, Great-West Lifeco Inc. has expanded across Canada, and into the United States, Europe, and Asia.

Today, Great-West Lifeco Inc. has over 24,300 employees, 30 million customers, and assets under management of over \$1248B. Furthermore, the company has a market capitalization of \$30.1B with revenues of over \$45.7B for the last twelve months, a return on invested capital of 13%, and a five-year compound annual growth rate of 16.1%.

### Business Segments

The Canadian segment of the business includes three business units. Through the Individual Insurance business unit, the Company offers life, disability and critical illness insurance products to individual clients. The Wealth Management business unit includes accumulation products and annuity products for both group and individual clients in Canada. Through the Group Insurance business unit, the Company provides life, accidental death and dismemberment, critical illness, health and dental protection, creditor and direct marketing insurance as well as specialty products to group clients in Canada.

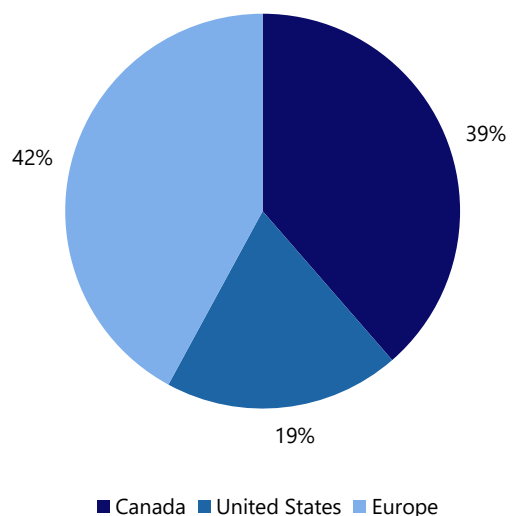
The United States segment primarily focuses on financial services where the Company provides an array of financial security products, including employer-sponsored defined contribution plans, administrative and recordkeeping services, individual retirement accounts, fund management as well as

investment and advisory services. The Company also provides life insurance, annuity and executive benefits products through its Individual Markets operations. Great-West Lifeco Inc. is currently the second largest defined contribution recordkeeper in the United States.

The Europe segment comprises two distinct business units: Insurance & Annuities and Reinsurance, together with an allocation of a portion of Lifeco's corporate results. Insurance & Annuities provides protection and wealth management products, including payout annuity products. These products are distributed through independent financial advisors (IFAs), a direct sales force, financial institution distribution, and employee benefits consultants. The company is the current market leader in group life and income protection in Europe.

### EXHIBIT IX

Geographic Distribution by Revenue (%)



Source(s): Company Reports, Capital IQ

## Company Overview

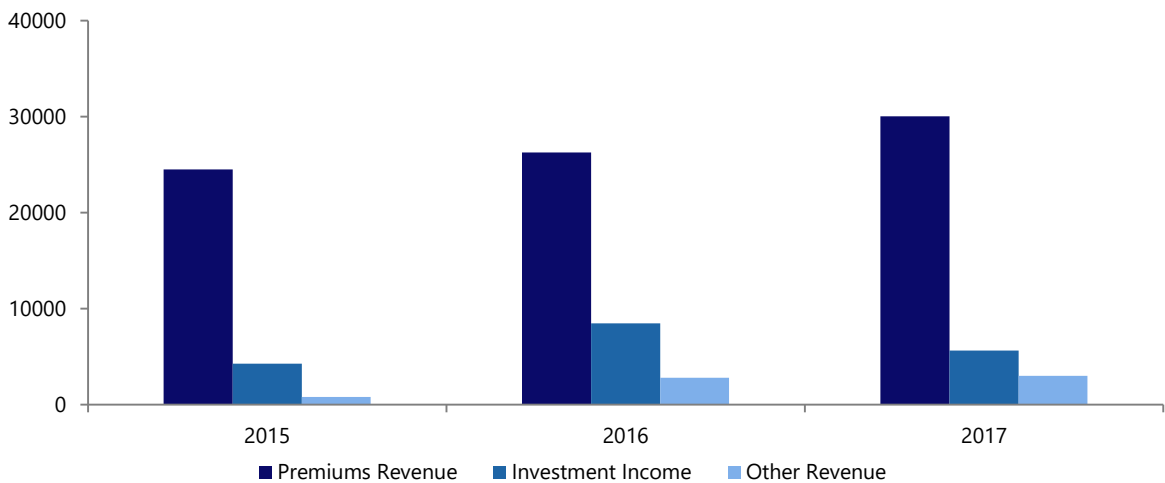
### Revenue Breakdown

The company's primary revenue source (78% of total revenue), insurance premiums are generated on a recurring basis through individual and group life and health insurance plans. Great-West Lifeco Inc. second revenue source (15% of total revenue), is earned through investment income. Investment income earned comprises income from investments that are classified as available-for-sale, loans and receivables and investments classified or designated as fair value.

The company's portfolio is made up of bonds (67% of total portfolio), stocks (14% of total portfolio), mortgage loans (13% of total portfolio), and investment properties (6% of total portfolio). The company's third revenue source (7% of total revenue), is generated from the fees earned from the management of segregated fund assets, proprietary mutual funds assets, and administrative services.

### EXHIBIT X

Revenue Distribution in MM \$USD

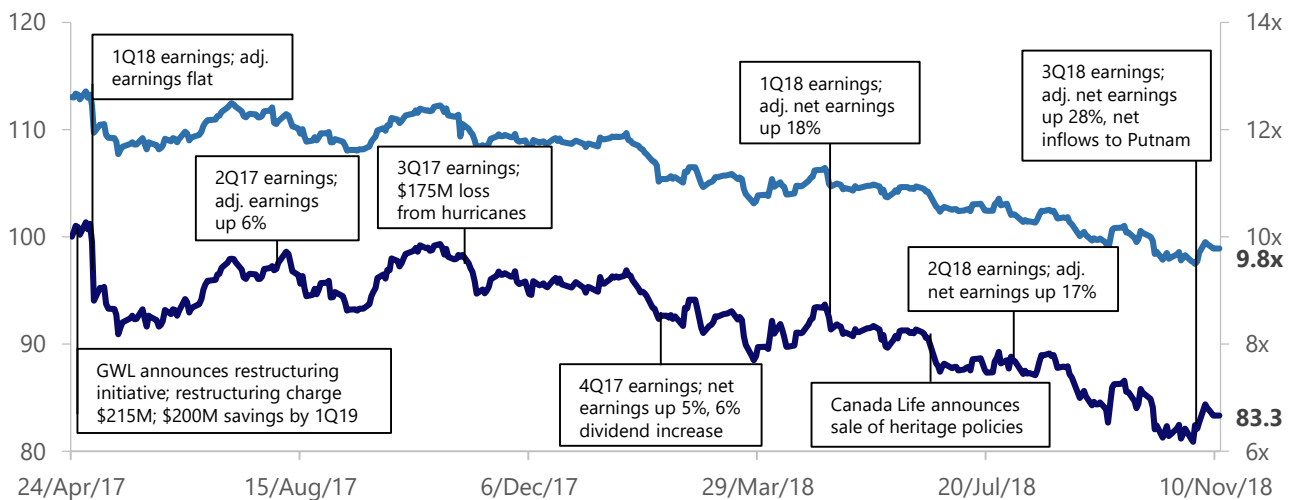


Source(s): Company Reports, Capital IQ

## Recent Developments

### EXHIBIT XI

#### GWO Share Price Performance



Source(s): Capital IQ

### Restructuring

Great West Life announced a restructuring initiative in its Canadian business on April 25, 2017. The restructuring involves the reduction of GWO's 12,000-member Canadian workforce by approximately 13%. The company recorded a pre-tax restructuring charge of \$215 million in the second quarter of 2017, and targeted \$200 million in pre-tax annualized savings by the first quarter of 2018. As of September 30, 2018, approximately \$180 million of pre-taxed annualized savings had been achieved.

This is one of several cost-reducing- and restructuring-related programs pursued by GWO; others include cost-reducing measures in their US and UK businesses as well as its sale of heritage insurance policies to Scottish Friendly in order to better position its UK business for growth.

### Decreasing Premium Relative to Peers

#### Earnings Quality

Despite strong growth in adjusted earnings, GWO's valuation premium relative to lifeco peers has narrowed since the announcement of its restructuring programs. Part of this is attributable to concerns over the quality of its earnings, as some of its earnings growth has come from management actions and changes in assumptions, which are viewed as low-quality sources of earnings.

#### Struggles with Putnam and Empower Platform

Another factor driving GWO's decline in multiples has been the weak performance of Putnam Investments, which has suffered capital outflows in recent years, as well as the slow growth of Empower, GWO's group retirement services business in the U.S. The company has continually stated that they are searching for opportunities for a "transformative" acquisition in order to improve the scale of Putnam Investments in order to improve the performance and profitability of the business.

## Drivers of Relative Valuation

### Popular Metrics

The most popular valuation metric for lifecos is the price to expected earnings ratio, which is most effective in times when economic outlooks are clear. However, when the macro conditions are ambiguous, the P/B ratio is more closely tracked. Factors that drive both ratios include higher ROE, quality of earnings, balance sheet strength, and quality of management.

The industry as a whole currently trades below their 10-year historical average multiples. This is because since 2008, ROE has declined and volatility of earnings has increased. This increase in volatility can be explained by low interest rates and Canadian lifecos shifting their product mix to be more exposed to movements in equity markets. A low rate environment has also put downward pressure on earnings. In some ways, negative risk sentiment still impacts the industry. Should interest rates rise and macroeconomic signs continue to be strong, lifecos will be able to improve their ROEs over the medium-term.

### Analyzing Earnings

Forecasting insurance company earnings can be difficult as the earnings of life insurance companies are greatly impacted by changes in actuarial reserves. Therefore, some of the most valuable analysis comes from examining the quality of earnings.

### EXHIBIT XII

#### Lifecos Trading Below 10-Year Average Multiples

Lifecos	Current 2019E	10-yr Historical Forward P/E		
		Low	Avg	High
GWO	9.5x	6.9x	11.8x	13.9x
IAG	7.8x	6.3x	10.7x	13.7x
MFC	6.9x	5.7x	11.x	14.2x
SLF	9.3x	6.4x	11.3x	16.2x
<b>Average</b>	<b>8.4x</b>	<b>6.3x</b>	<b>11.2x</b>	<b>14.5x</b>

Source(s): RBC Equity Research

Because management has much more in-depth information on actuarial changes, investors place a much greater emphasis on management commentary. For short-term forecasts, estimates can be made on "core earnings" which excludes non-core experience gains/losses.

### Impact of Equity Markets

As mentioned, equity market movements are a key driver of a life insurance company's performance. Fluctuations have a large impact on fees earned from variable annuities, and mutual fund products. In addition, they also impact the value of their reserves.

### EXHIBIT II

#### Canadian Life Insurance Universe

Lifecos Company Name	Market Cap (\$MM)	P / B			P / E		ROE		Div. Yield (%)	LICAT
		Current	5-yr	LTM	2017	2018E	2016	2017		
Manulife Financial Corporation	\$44,319	1.1x	1.1x	18.2x	10.0x	8.1x	7.4%	5.3%	4.5%	134.0%
Sun Life Financial Inc.	\$29,228	1.2x	1.4x	13.8x	11.8x	10.1x	11.8%	9.9%	4.1%	145.0%
Industrial Alliance Insurance and Fin. Services	\$5,326	1.0x	1.1x	9.1x	10.0x	8.8x	12.4%	10.7%	3.4%	120.0%
<b>Mean</b>		<b>1.1x</b>	<b>1.2x</b>	<b>13.7x</b>	<b>10.6x</b>	<b>9.0x</b>	<b>10.5%</b>	<b>8.6%</b>	<b>4.0%</b>	<b>133.0%</b>
<b>Median</b>		<b>1.1x</b>	<b>1.1x</b>	<b>13.8x</b>	<b>10.0x</b>	<b>8.8x</b>	<b>11.8%</b>	<b>9.9%</b>	<b>4.1%</b>	<b>134.0%</b>
<b>Great-West Lifeco Inc.</b>	<b>\$30,185</b>	<b>1.4x</b>	<b>1.5x</b>	<b>11.4x</b>	<b>11.2x</b>	<b>10.0x</b>	<b>11.8%</b>	<b>9.1%</b>	<b>5.1%</b>	<b>134.0%</b>

Source(s): Capital IQ, company Q3 2018 reports

## Drivers of Relative Valuation

In the case of variable annuities, insurers must increase their reserves when markets decline. A way to understand it is that lifecos operate under the assumption that equity markets will appreciate by 2% per quarter. While this may hold true for long-term estimates, it will often be wrong in the short term.

The result is that in quarters where market returns exceed 2%, there are reserve releases, while the opposite is true in quarters less than 2% growth. The main issue is that reserves are more sensitive to market downturns than they are to upswings. When markets are lower, a larger percentage of guarantees are "in the money". When markets are strong, guarantees

offered to annuity holders are "out of the money" and therefore have a lesser effect on reserves.

### Examining GWO's Premium

GWO currently trades at a slight premium to its peers, largely due to their higher ROE and greater stability in their earnings. They also experienced some benefit due to reserve releases and fair value adjustments to real estate assets. The market rewards companies that are less sensitive, less volatile, and that have higher quality earnings. As we can see, GWO is the least affected by market volatility, which is one of the reasons that they trade at a premium to peers.

### EXHIBIT XIII

Lifecos Estimated Sensitivity to Changes in Equity Markets

Company	10% Decrease in Equity Markets				
	Net Income Impact (\$mm)	Per Share (\$)	% of	% of 2018E	
			Quarterly Net Income	Net Income	Common Equity
GWO	(\$109.00)	(0.11)	(14.4%)	(3.6%)	(0.5%)
IAG	(\$32.00)	(0.29)	(21.3%)	(5.3%)	(0.6%)
MFC	(\$710.00)	(0.36)	(53.2%)	(13.3%)	(1.7%)
SLF	(\$150.00)	(0.25)	(21.7%)	(5.4%)	(0.7%)

Company	10% Increase in Equity Markets				
	Net Income Impact (\$mm)	Per Share (\$)	% of	% of 2018E	
			Quarterly Net Income	Net Income	Common Equity
GWO	\$58.00	0.06	7.7%	1.9%	0.3%
IAG	\$32.00	0.29	21.3%	5.3%	0.6%
MFC	\$490.00	0.25	36.7%	9.2%	1.2%
SLF	\$100.00	0.16	14.5%	3.6%	0.5%

Source(s): RBC Capital Markets, Company Reports

## References

---

1. Accenture
2. Capital IQ
3. Company Reports
4. OSFI
5. SNL
6. RBC Capital Markets
7. U.S. Treasury