

## Case Study

### The Battle of InterGen

InterGen Insurance Company is a multi-line property/casualty insurer with \$120 million in assets, \$60 million in surplus and an investment portfolio of \$100 million. That portfolio consists of \$20 million in various Risk Assets (equity index funds divided 20% EAFE, 80% S&P 1500) and an \$80 million investment grade bond portfolio with duration of 4.5 years and average credit rating of A-. The Company was founded twenty years ago, and is family owned (Please see exhibit #1).

InterGen does not have a formal investment committee separate from the Board of Directors. However, InterGen's key executives do meet periodically to discuss important investment ideas and trends.

InterGen is facing some of the lowest interest rates in US history. The difference between the book yield on their core fixed income portfolio and today's market yield has widened to 200 basis points (2%). That means new investment yields are slowly dragging down the portfolio's ability to provide adequate investment income.

Meanwhile, risk assets (investments that are not investment grade bonds) appear to be historically over-valued based on any number of widely followed metrics. However, risk assets have provided some terrific upside returns, but at increased volatility and, correspondingly, increased downside risk (Please see exhibit #2).

To add to this situation, InterGen is regulated by the California Department of Insurance, whose Commissioner

"has appointed the nation's first Deputy Insurance Commissioner of Climate and Sustainability in the United States, as California once again leads the nation by working with environmental and industry leaders to find innovative solutions to the risks posed by climate change. Our new Climate and Sustainability Office will address the threat of climate change by working with the insurance industry, climate experts, California and international leaders."

Thus, the issues surrounding investing with ESG (environmental, social, governance) in mind are becoming a larger concern for the regulator. And that will likely become a larger concern for all insurers in the state.

Albert InterGen, Chairman, has convened a Board meeting to specifically discuss the following and get answers to these questions:

#### **I. Should we make any material changes to our bond portfolio?**

- **Yes, let's increase duration, go up the yield curve a bit and get more yield**
- **Yes, let's increase credit risk a bit by get more yield**
- **No, it's a sucker's move to take on more risk now when everything seems overvalued**

- **Other:** \_\_\_\_\_
- **(Please see exhibit #3)**

## **II. Should we make any material changes to our Risk Assets portfolio?**

- **Increase the amount in Risk Assets because yields on bonds are so low**
- **Decrease the amount in Risk Assets because they are so overvalued**
- **Change to a different mix of Risk Assets but at the same total amount**
- **Other:** \_\_\_\_\_
- **(Please see exhibit #4)**

## **III. Should we consider ESG in our investment process?**

- **Yes, because it might improve our risk/reward in the long term**
- **Yes, because we better have some good answers when the CA DOI asks**
- **No, this is just another way for the regulators to impose their political preferences on us, without sufficient evidence of any long-term benefits**
- **Other:** \_\_\_\_\_
- **(Please see exhibit #5)**

This case is a role play, where you will be assigned to act as one of the following ‘players.’

- **Albert “Boomer” Intergen, Chairperson of the Board**
- **Benjamin “X” Intergen, President/CEO**
- **Charlie “Millennial” Intergen, Jr, Chief Financial Officer & Treasurer**
- **Don “Zoomer” Intergen, Chief Information Officer**
- **Outside Board Member**

Details for each of the participants are included below. Also, please feel free to read about your fellow participants to learn more about them.

Once everyone has completed reading this case study and asked questions, you will be sent to pre-assigned Zoom rooms. Dan, Nathan or Alton will be occasionally visiting each room to answer any additional questions. After 30 minutes, we will all reconvene in the original ‘large’ Zoom room and each group will share their thoughts.

### **#1 – Albert “Boomer” Intergen, Chairperson of the Board**

You are the co-founder of InterGen Insurance Company and have served as the Chairperson since its inception. You have seen the economy fluctuate and confound the experts in the past, but you have 100% trust in both the US Administration and Federal Reserve. But, you are approaching retirement in a few years. So, you want to see results NOW. If you don’t see results NOW, you will lose faith in your family’s ability to maintain and grow InterGen in the future. And, that means you will consider selling the family jewel of an insurance company.

## #2 – Benjamin “X” Intergen, President/CEO

You are the eldest son of Andrew Intergen, deceased, the co-founder of InterGen with Albert. If there was one thing your father told you when he named you president: Never act scared, no matter how bad the headlines. “Focus on InterGen and all will be well.” But times have changed. You are worried about what the next ten years might bring, due to what you see as today’s “unhinged” US monetary and fiscal policy. You’ve seen your Uncle Boomer’s leadership, at times imperial and self-centered, as a hindrance to meeting the challenges of a fast-changing world. Change is exciting, but where does Intergen fit in this new world?

## #3 – Charlie “Millennial” Intergen, Chief Financial Officer & Treasurer

You are the son of Benjamin “X” Intergen. Charlie is seen as the Intergen family member who went to a top college and graduated wanting to ‘change the world.’ He has seen how difficult that truly is, especially within the confines of a family-owned insurer. However, he is excited about the new technological future. He thinks Intergen has to change NOW to survive and have a place in that future. But, he worries if “OK Boomer” Albert Intergen understands that. Charlie is also very worried about the impact of climate change on Intergen and the world at large. What kind of company is Grandpa Albert and his Boomer buddies leaving us? How will social ills hurt the economy and affect Intergen? Is Intergen even structured for success?

## #4 – Don “Zoomer” Intergen, Chief Information Officer

Don graduated last year from Harvard with a major in computer science. “Zoomer” is heavily wired into the internet and social media. He reluctantly returned ‘home’ to InterGen after dreaming of following in the footsteps of a certain Mr. Zuckerberg. Don doesn’t have the best of social skills. In fact, he seldom looks you in the eyes when he speaks, seemingly preoccupied with something else. But nobody can deny his intelligence and ability to use his IT skills to solve problems...if they are interesting for him. He has only a modest interest in investments, but does have an active Robinhood account.

## #5 - #7– Outside Board Member

You are an external Board member, added to the Board about ten years ago. As a long-time friend of the Intergen family, you’ve been amazed at how the family has grown and how well InterGen has done in the past. Besides enjoying the benefits of being a Board member, you’ve enjoyed the interactions you’ve had socially with everyone in the Intergen clan. However, you are also well aware of the intergenerational conflicts amongst the four Intergens. And, you realize that a diplomatic approach may be the only way to assist in solving both Intergen and InterGen Insurance problems. You realize you are not always correct, but who is?

# Exhibit #1

## InterGen Insurance Company For the Period Ending, December 31<sup>st</sup>, 2020

### Balance Sheet

Assets	12/31/2020	As %
Cash & Cash Equivalents	5,000,000	4.3%
Investments	100,000,000	87.0%
--- IG Fixed Income (80%)	80,000,000	
--- Equity (20%)	20,000,000	
Other Assets	10,000,000	8.7%
<b>Total Assets</b>	<b>115,000,000</b>	<b>100.0%</b>
<b>Liabilities &amp; Equity</b>		
Reserves (IBNR)	19,250,000	35.0%
Reserves (Case)	33,000,000	60.0%
Unearned Premium	2,750,000	5.0%
<b>Total Liabilities</b>	<b>55,000,000</b>	<b>47.8%</b>
<b>Total Surplus/Equity</b>	<b>60,000,000</b>	<b>52.2%</b>
<b>Total Liabilities &amp; Surplus/Equity</b>	<b>115,000,000</b>	<b>100.0%</b>

### Income Statement

	12/31/2020
Net Premiums Earned	25,000,000
Underwriting Expense	(22,500,000)
<b>Net Underwriting Income</b>	<b>2,500,000</b>
Underwriting Expense	(2,000,000)
<b>Net Operating Income</b>	<b>500,000</b>
Investment Income	2,240,000
Chg. Unrealized G/L	5,500,000
<b>Comprehensive Net Income</b>	<b>8,240,000</b>

#### Notes:

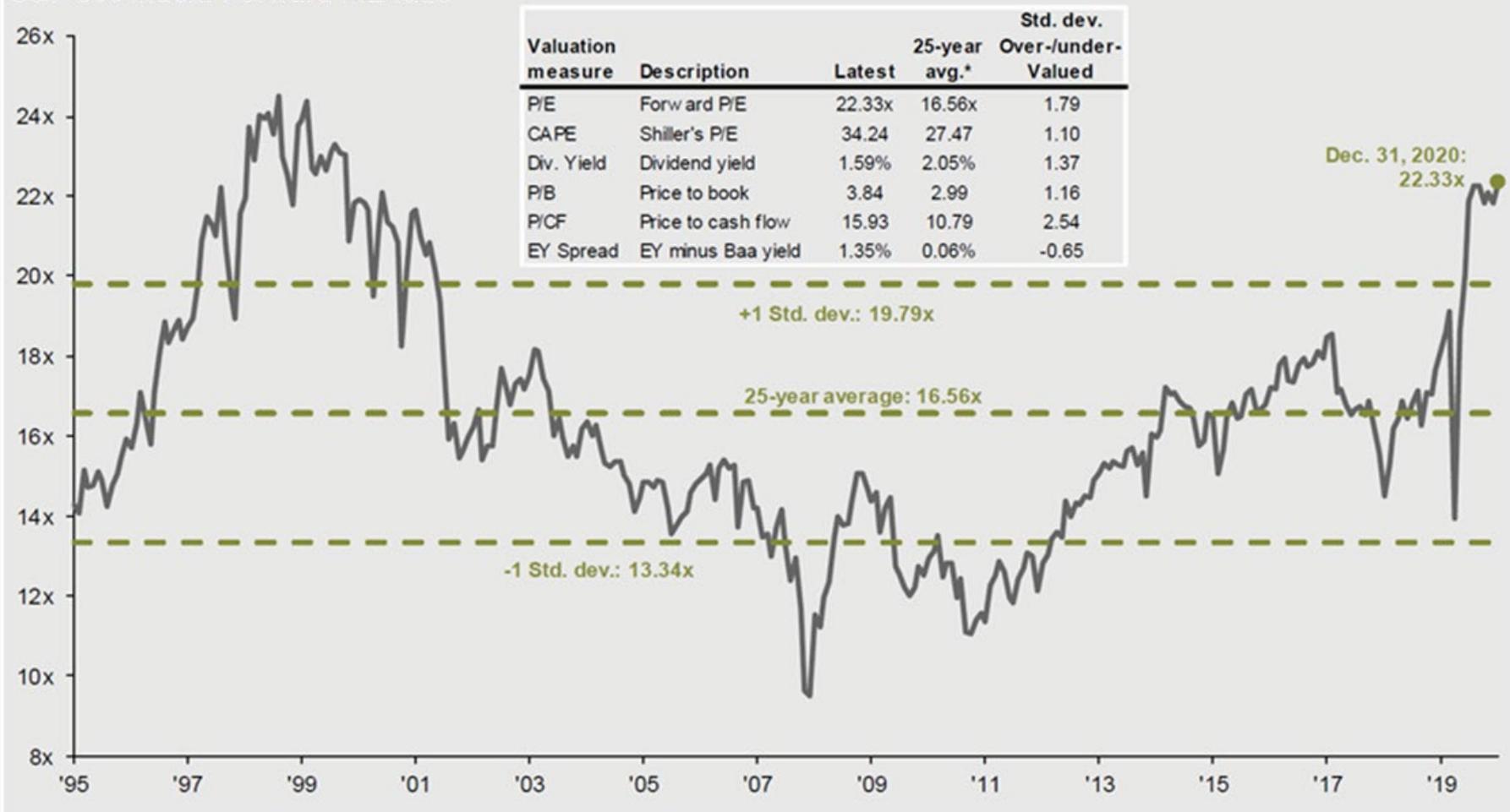
- (1) Net of reinsurance
- (2) Commercial Auto, Property and Liability
- (3) Only writes business in CA

Key Ratios	Year 2020	Avg 2016-2020
Loss Ratio	90.0%	88.0%
Combined Ratio	98.0%	96.0%
Operating Ratio	89.0%	92.0%
Investments Book Yield	2.8%	3.0%
Reserve Leverage	87.1%	90.0%
Operating Leverage	41.7%	41.0%
Net Leverage	128.8%	131.0%
Equity Investments-to-Surplus Ratio	33.33%	30.0%



# Exhibit #2

## S&P 500 Index: Forward P/E ratio



# Exhibit #3

## RECENT OAS SPREAD MOVEMENTS

ICE BofA INDEX	US CORP	US CORP AAA-A	US CORP BBB	US HIGH YIELD BB	US HIGH YIELD B	US MBS	US CMBS FIXED RATE AAA	US ABS FIXED RATE AAA	USD CEMBI INDEX	USD CEMBI IG INDEX	USD CEMBI HY INDEX	US HIGH YIELD
Mean OAS	162	127	210	381	566	51	152	90	293	218	774	576
STD OAS	84	76	103	181	253	30	158	99	152	99	502	269
Min OAS	81	61	112	174	241	-19	53	33	77	61	216	246
Max OAS	608	541	766	1374	1862	165	1038	723	1004	677	2492	1978
Max OAS Date (MMM-YY)	Nov-08	Nov-08	Dec-08	Nov-08	Nov-08	Dec-08	Nov-08	Dec-08	Nov-08	Nov-08	Nov-08	Nov-08
12/31/19 OAS	101	71	130	202	356	42	70	48	236	167	470	360
12/31/19 OAS Percentile	18%	9%	15%	3%	16%	42%	22%	22%	29%	22%	23%	14%
02/29/20 OAS	130	96	164	333	534	64	75	40	295	213	562	506
02/29/20 OAS Percentile	39%	39%	36%	47%	54%	76%	28%	8%	57%	52%	47%	51%
March 2020 OAS Wide	398	315	487	850	1209	129	298	472	612	425	1071	1109
March 2020 OAS Wide Percentile	97%	97%	97%	97%	98%	97%	92%	98%	97%	97%	81%	97%
March 2020 OAS Wide Date (MMM-DD)	Mar-23	Mar-23	Mar-23	Mar-23	Mar-23	Mar-19	Mar-24	Mar-24	Mar-23	Mar-23	Mar-23	Mar-23
03/04/21 OAS	97	72	121	240	351	10	67	33	232	154	451	322
03/04/21 OAS Percentile	16%	10%	7%	18%	14%	2%	17%	1%	28%	18%	19%	5%
12/31/19 to 03/04/21 OAS Change	-4	1	-9	38	-5	-32	-3	-15	-4	-13	-19	-38
02/29/20 to 03/04/21 OAS Change	-33	-24	-43	-93	-183	-54	-8	-7	-63	-59	-111	-184
March Wide to 03/04/21 OAS Change	-301	-243	-366	-610	-857	-119	-231	-439	-380	-271	-620	-788
Date From	12/31/99	12/31/99	12/31/99	12/31/99	12/31/99	12/31/99	12/31/99	12/31/99	12/31/01	12/31/01	12/31/01	12/31/99
Date To	2/29/20	2/29/20	2/29/20	2/29/20	2/29/20	2/29/20	2/29/20	2/29/20	2/29/20	2/29/20	2/29/20	2/29/20
12/31/19 Yield	2.90	2.60	3.19	3.75	5.35	2.45	2.44	2.14	4.18	3.53	6.47	5.36
03/04/21 Yield	2.17	1.92	2.43	3.43	4.58	1.49	1.47	0.59	3.46	2.87	5.38	4.26
Yield Change 12/31/19 to 03/04/21	-0.73	-0.68	-0.76	-0.32	-0.77	-0.96	-0.97	-1.55	-0.72	-0.67	-1.08	-1.10

Source: JP Morgan, ICE Bank of America

OAS = Option-Adjusted Spread relative to comparable duration US Treasuries

STD = Standard Deviation

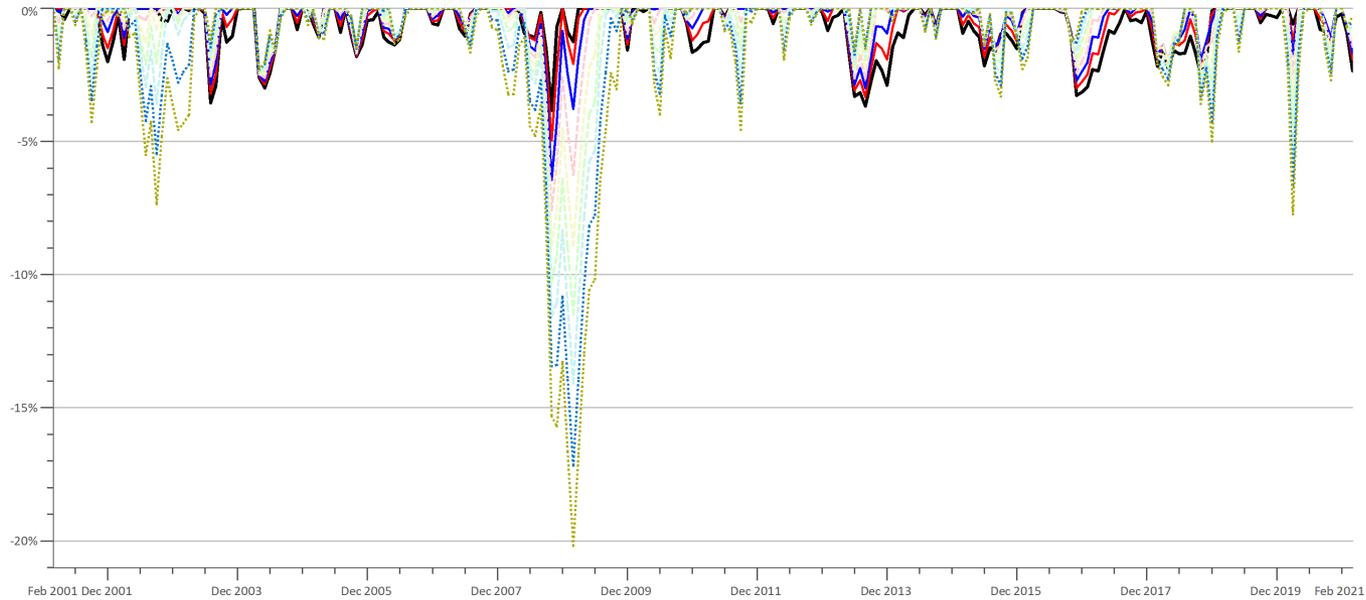
CEMBI = Corporate Emerging Market Bond Index



# Exhibit #4

## Drawdown

March 2001 - February 2021



- Barclays Capital U.S. Aggregate
- 95% Fixed Income / 5% Equity
- 90% Fixed Income / 10% Equity
- 85% Fixed Income / 15% Equity
- 80% Fixed Income / 20% Equity
- 75% Fixed Income / 25% Equity
- 70% Fixed Income / 30% Equity
- 65% Fixed Income / 35% Equity
- 60% Fixed Income / 40% Equity

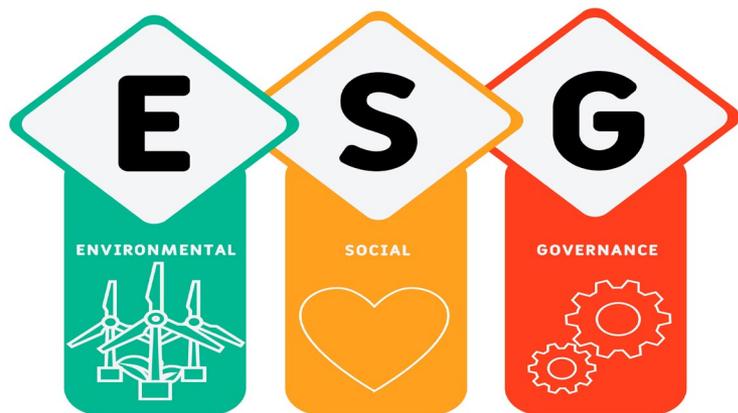
### Drawdown Table

March 2001 - February 2021: Summary Statistics

	Return	Standard Deviation	Sharpe Ratio	# of Up Periods	# of Down Periods	Average Up Return	Average Down Return	Best Period Return	Worst Period Return	Max Drawdown	Max Drawdown Length	Longest Drawdown	Gain to Loss Ratio
Barclays Capital U.S. Aggregate	4.59%	3.43%	0.94	158	82	0.91%	-0.65%	3.73%	-3.36%	-3.83%	7	-2.46%	1.40
95% Fixed Income / 5% Equity	4.83%	3.27%	1.05	165	75	0.88%	-0.66%	3.62%	-3.09%	-4.96%	6	-2.11%	1.33
90% Fixed Income / 10% Equity	5.11%	3.31%	1.13	165	75	0.90%	-0.64%	3.56%	-3.86%	-6.43%	6	-6.43%	1.41
85% Fixed Income / 15% Equity	5.30%	3.51%	1.12	170	70	0.91%	-0.71%	3.40%	-4.45%	-7.60%	6	-7.60%	1.28
80% Fixed Income / 20% Equity	5.52%	3.87%	1.07	175	65	0.94%	-0.86%	3.77%	-5.16%	-8.91%	6	-8.91%	1.10
75% Fixed Income / 25% Equity	5.74%	4.34%	1.01	167	73	1.08%	-0.90%	4.29%	-5.88%	-11.49%	10	-11.49%	1.19
70% Fixed Income / 30% Equity	5.95%	4.89%	0.94	162	78	1.21%	-1.00%	4.81%	-6.60%	-14.08%	16	-14.08%	1.21
65% Fixed Income / 35% Equity	6.15%	5.50%	0.87	165	75	1.30%	-1.22%	5.33%	-7.33%	-17.17%	16	-17.17%	1.07
60% Fixed Income / 40% Equity	6.35%	6.15%	0.81	166	74	1.41%	-1.43%	5.87%	-8.06%	-20.18%	16	-20.18%	0.98
S&P 500	7.89%	14.92%	0.44	159	81	3.07%	-3.87%	12.82%	-16.79%	-50.95%	16	-50.95%	0.79



# Exhibit #5



**The Bottom Line:** One challenge of ESG is the absence of a universally-adopted framework for measurement and reporting, though many third parties are working to address this. Even so, the majority of SAA clients, who pursue responsible/sustainable investing will focus on ESG integration (see below) via the use of mutual funds, exchange-traded funds, and their core fixed income managers’ internal ESG integration approaches.

## CONSIDERING ESG ISSUES WHEN BUILDING A PORTFOLIO (known as: ESG integration)

## IMPROVING INVESTEEES’ ESG PERFORMANCE (known as: active ownership or stewardship)

### Integration

### Screening

### Thematic

### Engagement

### Proxy Voting

Explicitly and systematically including ESG issues in investment analysis and decisions, to better manage risks and improve returns.

Applying filters to lists of potential investments to rule companies in or out of contention for investment, based on an investor’s preferences, values or ethics.

Seeking to combine attractive risk/return profiles with an intention to contribute to a specific environmental or social outcome. Includes impact investing.

Discussing ESG issues with companies to improve their handling, including disclosure, of such issues. Can be done individually, or in collaboration with other investors.

Formally expressing approval or disapproval through voting on resolutions and proposing shareholder resolutions on specific ESG issues.