



Atidot

AI for life insurance

THE WAY AI AND PREDICTIVE ANALYTICS IMPACTS LIFE
INSURANCE CARRIERS IN THE NEW ERA



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Do we still need actuaries?

RETFRC exam, April 2023

2.

(8 points) A small professional services firm sponsors a final average pay defined benefit pension (DB) plan for all employees.

The DB plan has been a differentiator for the firm in retaining employees in an industry where turnover is common, but they have seen a sharp increase in turnover in recent months.

Plan provisions

Normal retirement age	Age 65
Early retirement age	Age 55
Normal retirement benefit	2% final average earnings per year of service
Early retirement benefit	Accrued benefit reduced by 0.25% per month that early retirement precedes age 62 for actives, and actuarially reduced for members who terminate prior to retirement
Termination benefit	Actuarially equivalent lump sum of the accrued pension payable at age 65, or deferred pension payable at normal retirement age

Assumptions

Retirement assumption: 100% at age 62

Termination assumption: None prior to retirement

Historical plan experience

	1/1/2018	1/1/2019	1/1/2020	1/1/2021	1/1/2022
Retirement (gains)/losses	(\$2,200)	\$1,400	(\$10,200)	(\$6,700)	(\$7,100)
Termination (gains)/losses	(\$5,300)	(\$3,800)	(\$4,700)	(\$8,200)	(\$10,500)
Unfunded going concern liability	\$66,000	\$74,000	\$68,000	\$61,000	\$53,000

(a) (3 points) Assess the appropriateness of the current retirement and termination assumptions.

ANSWER:



Assess the appropriateness of the current retirement and termination assumptions.



The retirement and termination assumptions used by the firm in this case study appear to be inconsistent with the firm's actual experience, suggesting that they may not be appropriate.

Retirement Assumption: The firm assumes 100% retirement at age 62. However, the historical plan experience shows a pattern of retirement losses, which means that fewer employees are retiring at age 62 than expected. This could be due to a variety of factors, such as employees choosing to work longer or leaving the firm before reaching retirement age. Given this pattern, the assumption of 100% retirement at age 62 seems to be overly optimistic and may need to be revised.

Termination Assumption: The firm assumes no terminations prior to retirement. However, the historical plan experience shows a pattern of increasing termination gains, which means that more employees are leaving the firm before retirement than expected. This is also consistent with the firm's recent experience of increased turnover. Given this pattern, the assumption of no terminations prior to retirement seems to be unrealistic and may need to be revised.

In conclusion, both the retirement and termination assumptions appear to be inappropriate given the firm's actual experience. The firm may need to conduct a more detailed analysis of its workforce demographics and trends to develop more accurate assumptions. This could involve analyzing data on employee age, tenure, and reasons for leaving the firm, as well as industry trends and economic conditions. The firm may also need to consider the potential impact of changes in its pension plan or other employee benefits on retirement and termination rates.

Regenerate response

Send a message



Do we still need underwriters?

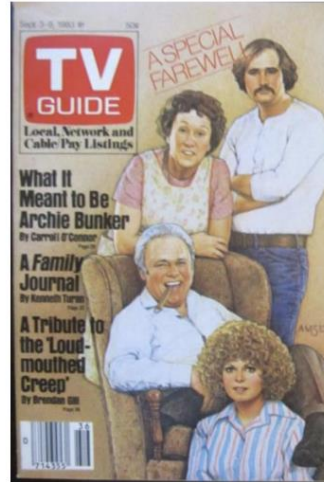
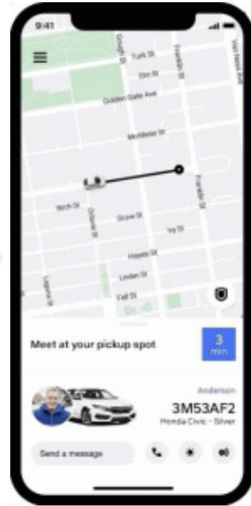
Assessing policyholder needs and recommended premium

Sure, here's the list of people in a table format:

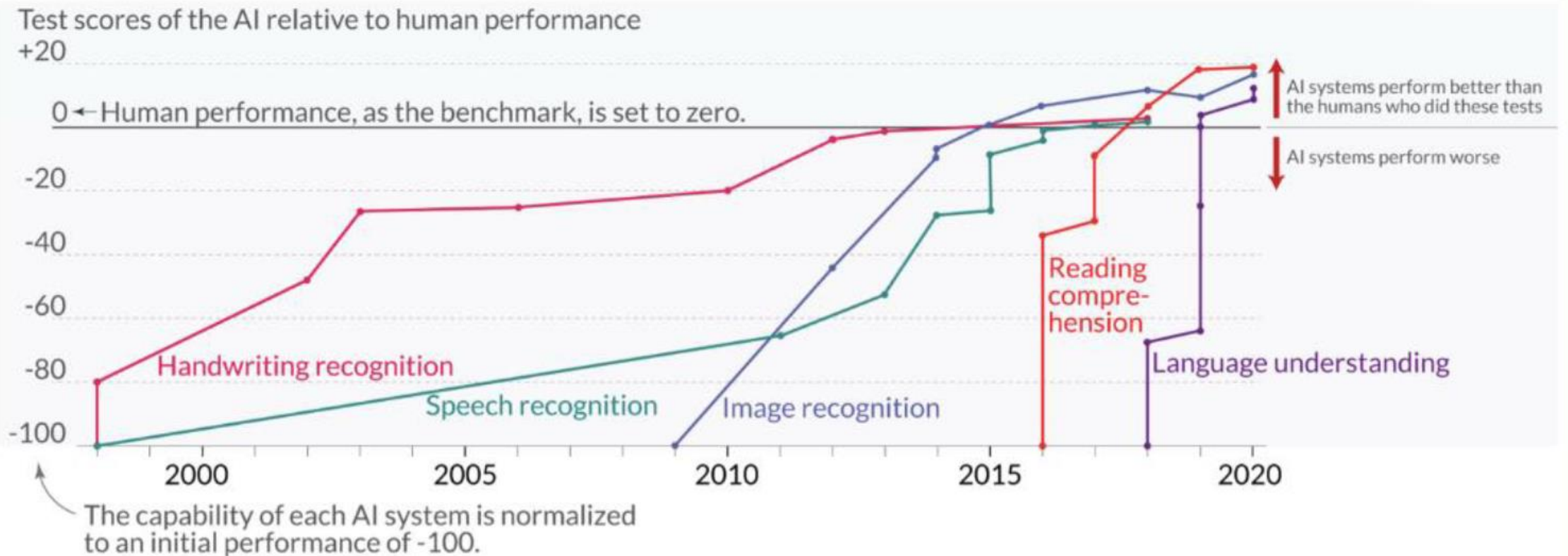
No.	Name	Age	Weight	Height	Health History	Lifestyle	Occupation	Hobbies	Gender	Location	Policy Type	Coverage Amount	Driving Record	Estimated Premium
1	Jessica Wilson	23	120 lbs	5'4"	Excellent	Non-smoker, exercises regularly	Software Engineer	Reading	Female	Urban area with low crime rate	Term life	\$200,000	Clean	\$25/month
2	Sarah Taylor	27	125 lbs	5'7"	Good	Occasional drinker, exercises occasionally	Teacher	Hiking	Female	Suburban area	Term life	\$250,000	One speeding ticket	\$30/month
3	Maria Johnson	28	140 lbs	5'6"	Good	Non-smoker, sedentary	Accountant	Cooking	Female	Urban area with moderate crime rate	Whole life	\$300,000	Clean	\$45/month
4	Laura Thomas	30	135 lbs	5'8"	Excellent	Non-smoker, exercises regularly	Nurse	Yoga	Female	Rural area	Term life	\$250,000	Clean	\$35/month
5	Emily Davis	32	130 lbs	5'5"	Good	Non-smoker, sedentary	Graphic Designer	Painting	Female	Urban area with low crime rate	Term life	\$200,000	Clean	\$40/month
6	John Smith	35	180 lbs	5'11"	Fair	Smoker, sedentary	Construction Worker	Fishing	Male	Rural area	Whole life	\$500,000	Two speeding tickets	\$70/month
7	David Anderson	38	205 lbs	6'1"	Fair	Non-smoker, sedentary	Lawyer	Golf	Male	Urban area with high crime rate	Universal life	\$1,000,000	Clean	\$80/month
8	Michael Moore	40	190 lbs	5'10"	Poor	Smoker, sedentary	Truck Driver	Watching TV	Male	Suburban area	Term life	\$500,000	One accident	\$100/month
9	Robert Brown	45	200 lbs	6'2"	Fair	Occasional smoker, exercises occasionally	Police Officer	Motorcycling	Male	Urban area with moderate crime rate	Whole life	\$750,000	Clean	\$90/month
10	William Miller	50	220 lbs	6'0"	Poor	Smoker, sedentary	Miner	Watching TV	Male	Rural area	Whole life	\$1,000,000	Three speeding tickets	\$120/month

Again, these are completely fictional characters and any resemblance to real individuals is purely coincidental.

AI has been around for years

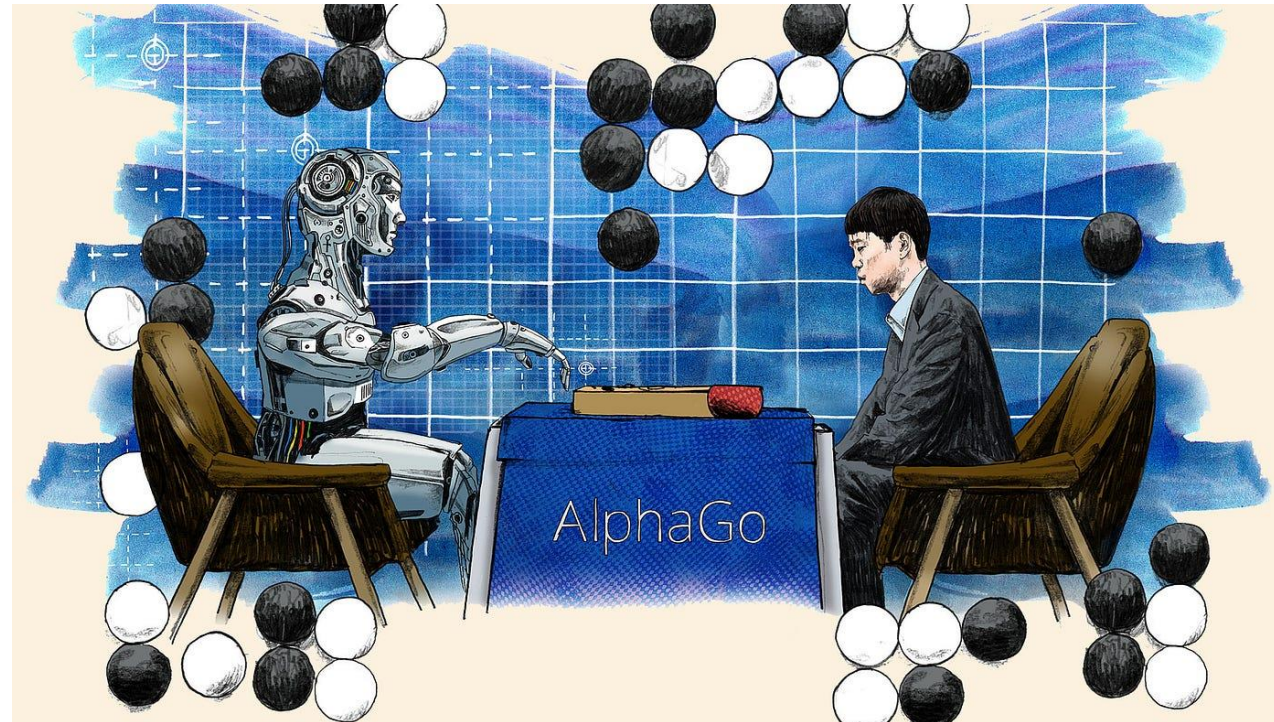


So what is happening here?



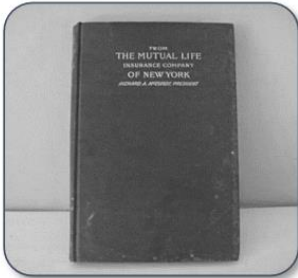
How does it happen?

From deep blue to deep mind to alpha go



Why insurance?

Tariff Books
Pre-1950s



Big personal lines carriers



Mainframes
1950s/60s



Multi-Liners



Minicomputers
1970s/80s



Specialists



W. R. Berkley Corporation



Personal Computers
1990s/2000s



Bermuda Reinsurers



Mobile, Cloud, NLP, AI, ML...
2010s-2020s?



To be determined

Source: adapted from Dowling & Partners (with permission)

The 3 Data Eras

The Digitization Era

- ✓ Empowering the employees
- ✓ Digitizing the data, integrating the systems, providing different business units access to various data sources, dashboarding, reporting and analytics, move to the cloud

D2C, Self Serve, Engagement Era

- ✓ Empowering the consumer to do simple things
- ✓ Driving digital access to portals, online purchase capabilities, streamlining UW processes, integrating the agency tools to the carrier tools

AI Assisted Insurance Era

- ✓ AI focuses on the long tail while human focus on high-end complex cases
- ✓ Enabling AI to assess customer needs, customize journeys, personalized policies in a heartbeat

This Future is now!

Maximize LTV/CAC by analyzing policyholder behavior

Utilizing AI and ML to generate engagement opportunities from in-force and new business



Incorporate policyholder data together with Atidot proprietary and 3rd party data comprised of 40 million life & annuity policies



Apply data to Atidot-trained AI modules that finds who is likely to lapse, upsell, cross sell, when and into what product



Generate high-propensity audiences, to match customer profile, use insight to increase engagement and loyalty



Apply audiences to engagement campaigns and drive opportunities to producers and internal teams

80%

Reduction in cost per application

3X

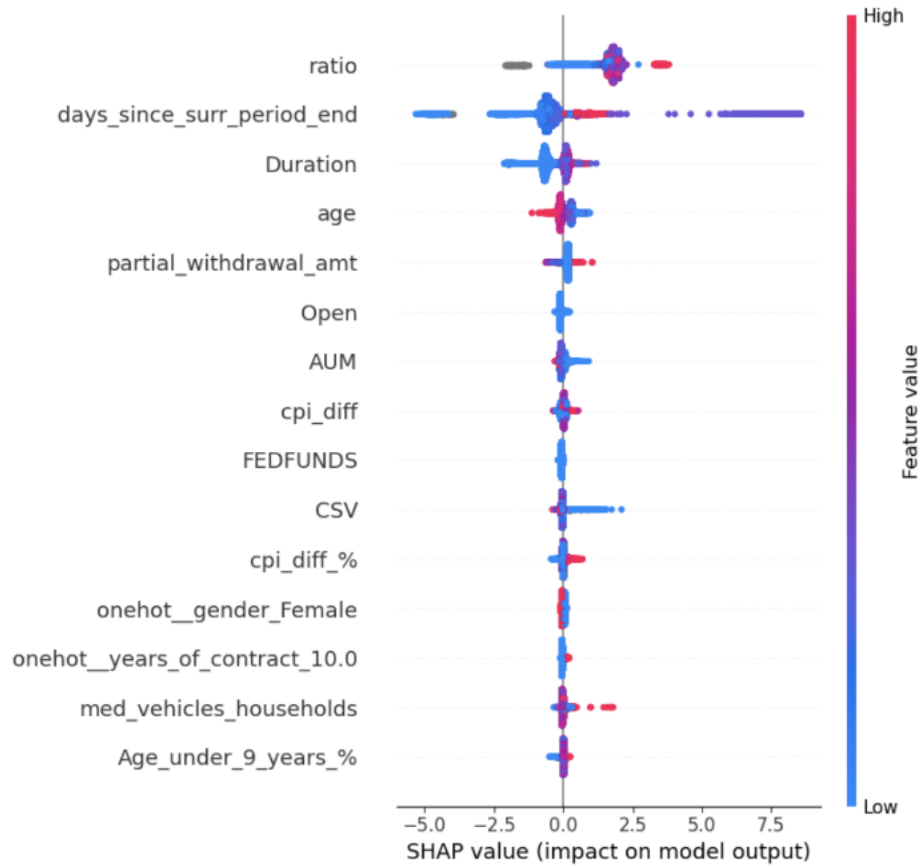
Increase in producers' written premium

\$100M

Over \$100M annual premium opportunity in retention and upsell

Predictability vs. Explainability

From this:



To this:

	Policyholder Stories	Number of Policies	AUM Upside
Retention ⓘ			
Policies 190			
Potential Upside \$38.13K			
Lapse Run Results			
	Possible Policy Update Needed	62	\$12K
	Agent Attention Needed	103	\$21K
New Business ⓘ			
Policies 6,015			
Potential AUM \$11.63M			
Underinsurance Run Results			
	Career Pivot	2,588	\$5M
	Life Event	2,141	\$3M
	Family Change	26	\$118K
	Return To Work	70	\$342K
Total		6,205	\$11.67M

Talk to an AI assisted advisor about your orphaned policy

If you want to talk to an AI assisted advisor – text me @ 669-467-3241 with full name, company name and email

The screenshot shows a text message conversation on a dark background. The AI assistant (represented by a blue person icon) sends the following messages:

- "Hello Dror, I'm your AI life insurance assistant. Thank you for reaching out. Are you interested in purchasing a term life insurance policy today?"
- "I apologize for that. As an AI assistant, I'm programmed to assist with term life insurance policies only. However, I can recommend a few reliable insurers who provide whole life insurance. Would you like me to assist you with that?"
- "Choosing an insurance company can depend on several factors such as location, age, health, and other personal circumstances. It's best to speak with a licensed insurance agent to find the right insurer for your needs. I can help you schedule a meeting with an agent who can provide you with more information and answer your questions. What day and time are you available for a meeting with the agent?"
- "The cost of a whole life insurance policy can vary depending on your age, health, coverage amount, and other factors. Generally, whole life insurance tends to be more expensive than term life insurance policies. It's best to get a personalized quote from an insurance company or licensed agent. Would you like me to schedule a meeting with an agent who can provide you with a quote?"
- "The amount of coverage you can receive for a \$500 per month premium payment will depend on a variety of factors, such as your age, health, gender, and other personal details. To find out the exact amount of coverage you can receive for this premium amount, it's best to speak with a licensed insurance agent. Would you like me to schedule a meeting with an agent who can provide you with more information and a personalized quote?"

The user (represented by a blue person icon) sends the following questions:

- "Whole life"
- "Who is the best one?"
- "How much does it cost on average?"
- "If I want to pay 500 a month, how much cover do I get?"

At the bottom of the screen, there is a text input field with the placeholder "Text message" and a row of icons for emojis, GIFs, images, and a send button labeled "SMS".

Let's pause for a second and talk about Privacy

Privacy, Bias, Discrimination, Security, PII

Q&A

The logo for Atidot features the word "Atidot" in a white, sans-serif font. The letter 'A' is stylized with a green dot on its left side. The background is a solid blue color with several concentric white circles centered behind the text.

Atidot

THANK YOU

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