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# Summary: Regulating Robo Advice Across the Financial Services Industry

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# Summary: Regulating Robo Advice Across the Financial Services Industry

## **Summary**

In general, a robo advisor can be defined as an automated service that ranks, or matches, consumers to financial products on a personalized basis, sometimes in addition to providing related services such as educating consumers and selling products to them. Often associated with web-based financial investment services, a robo advisor can also include consumer financial product intermediaries such as automated mortgage brokers and insurance exchanges, as well as lead generation services such as Zillow, NerdWallet, and Mint.com. Although investment-focused robo advisors have received the most scrutiny from regulators, the same promises and regulatory concerns raised by investment robo advisors apply to their insurance and banking counterparts. The benefit of defining robo advisors as a general category of tools that span different financial services sectors is that an inclusive approach will encourage more cross-sharing and collaborative thinking to tackle similar challenges and opportunities, including regulatory questions.

## **Keywords**

robo advisor, investment, regulation, algorithm, banking, financial products, information technology, choice architecture

## **Disciplines**

Business Law, Public Responsibility, and Ethics | Economic Policy | Finance | Legal Theory | Public Affairs | Technology and Innovation

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## Summary: Regulating Robo Advice Across the Financial Services Industry

Seminar by Professor Tom Baker

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Regardless of the specific financial service, there are four core components of robo advisors that require distinct capabilities to assess. Each of these components has their own regulatory concern.

### ALGORITHMS AND MODELS

The main regulatory concerns with algorithms and models are controlling inherent bias as well as guaranteeing a certain level of competency. The programmer who wrote the algorithm may know a lot about code, but how much do they know about insurance (or other financial products)?

CORE COMPONENT OF ROBO ADVISING	REGULATORY CONCERN
Algorithms and models	Bias, competence, fairness
Data <ul style="list-style-type: none"><li>Financial products and attributes</li><li>Consumer attributes</li></ul>	Access, quality <ul style="list-style-type: none"><li>Producers won't provide</li><li>Consumer data incomplete, biased</li></ul>
Choice architecture	Bias, competence
IT infrastructure	Security, privacy, reliability



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Any biases the programmer or designer may have, conscious or unconscious, could be baked into the code or model. If the algorithm and model pass the bias and competency tests, there is an additional concern about fairness. Is the algorithm and model somehow classifying the customer from an unfair vantage point that is perhaps a reflection of a structural inequality inherent in the historical data?

## DATA

Just as there are regulatory concerns about algorithms, there are questions about data—not only in ensuring the quality of the data, but also taking a proactive role in making data available. One key factor that determines what type of robo advisors is developed is the ease by which certain types of data can be obtained. For example, data surrounding publicly traded securities are easily accessible, however, in the cases of mortgages, credit cards, and private insurance, this is not so. Without access to reliable data, certain parts of the financial sector will be unable to benefit from the automated function of robo advice.

The Open Banking or Open API Initiative, which is making progress in Europe, is one example of government acting to make data available to facilitate a private market in tools. The regulatory concerns about data are about access: has the company obtained access to reasonable sources of data and are there any concerns that an inability to obtain data will lead to bias; where there are gaps in data, what are the strategies that the robo advisor considered to address the gaps; does the regulator have the authority to increase access to data and thereby improve the quality of the robo advice?

“I have a mantra about data.  
The less you’ve worked with data,  
the better you think data are.”

## CHOICE ARCHITECTURE

In looking at choice architecture—the organization of the context in which people make decisions—the regulatory concern is with biases in how information is presented to the consumer and how the design of the interface can impact decision making. Regulators need to review and confirm that the company has done rigorous experimental testing in order to assess whether the robo advisors reflect a meaningful and empirically informed choice architecture effort. This testing and verification is more difficult in the context of hybrid robo advisors, in which customers interact with a person who operates the robo advisor behind the scenes.

## INFORMATION TECHNOLOGY INFRASTRUCTURE

Because robo advisors rely on access to financial, health, banking, and other private data, IT security is paramount. Financial services regulators already appear to recognize the need to enhance their capacities in this area.

<p><b>Bronze</b></p> <ul style="list-style-type: none"> <li>Lower monthly cost</li> <li>Higher costs when you receive medical services</li> </ul>  <p>Who chooses Bronze plans?</p> <p>A good option if you want a lower monthly premium and don't expect to receive a lot of medical services.</p>	<p><b>Silver</b></p> <ul style="list-style-type: none"> <li>Monthly cost can run higher than Bronze</li> <li>Lower costs when you receive medical services compared to Bronze</li> </ul>  <p>Who chooses Silver plans?</p> <p>A good option if you want to balance your monthly premium and out-of-pocket costs.</p>	<p><b>Gold</b></p> <ul style="list-style-type: none"> <li>Highest monthly cost</li> <li>Lowest costs when you receive medical services</li> </ul>  <p>Who chooses Gold plans?</p> <p>A good option if you expect to receive a lot of medical expenses.</p>
<p><b>Bronze</b></p> <ul style="list-style-type: none"> <li>Highest monthly cost</li> <li>Lowest costs when you receive medical services</li> </ul>  <p>Who chooses Bronze plans?</p> <p>A good option if you expect to receive a lot of medical services.</p>	<p><b>Silver</b></p> <ul style="list-style-type: none"> <li>Monthly cost can run higher than Gold</li> <li>Lower costs when you receive medical services compared to Gold</li> </ul>  <p>Who chooses Silver plans?</p> <p>A good option if you want to balance your monthly premium and out-of-pocket costs.</p>	<p><b>Gold</b></p> <ul style="list-style-type: none"> <li>Lower monthly cost</li> <li>Higher costs when you receive medical services</li> </ul>  <p>Who chooses Gold plans?</p> <p>A good option if you want a lower monthly premium and don't expect to receive a lot of medical services.</p>

### Case Example: Choice Architecture

Behavioral economics research by Eric Johnson, Peter Ubel, and David Comerford, studied how preconceived associations can alter people’s perceptions of insurance plans. Using the North Carolina Health Exchange as a model, the researchers asked a sample of participants which category of plans they would look at first if they were shopping for health insurance. To half the people they described the gold plans as having higher monthly premiums and lower out-of-pocket costs. For the other half, they switched the gold and bronze plans, describing the gold plans as having lower monthly premiums and higher out-of-pocket costs. Although the labels were arbitrary and shouldn’t impact people’s choices, the majority said they preferred gold plans over bronze plans, regardless of which plan was labeled as gold.

Healthcare.gov 3.0 — Behavioral Economics and Insurance Exchanges  
Peter A. Ubel, M.D., David A. Comerford, Ph.D., and Eric Johnson, Ph.D.  
N Engl J Med 2015; 372:695-698 February 19, 2015 DOI: 10.1056/NEJMp1414771

## CONCLUSION

Robo advising technology is in a nascent stage of development and researchers are just beginning to understand the potential implications of how automated services will change the financial industry. As these automated services proliferate, regulators will need to take a more active role in assessing minimum competence, protecting consumers, and ensuring robo advising companies have access to high quality data. But what is the proper role for government in monitoring the quality of robo advice? For instance, should there be a minimum competence and honesty standard for robo advisors, the equivalent of a broker’s license, or registered investment advisor license and insurance agent license? Furthermore, what is the role of government in making data available to facilitate entrepreneurship in the development of a wide range of robo advice tools? While regulators of course need to be vigilant, it is also important they not over-react to the deployment of robo advisors.