

NATIONAL COUNCIL OF INSURANCE LEGISLATORS
SPECIAL COMMITTEE ON RACE IN INSURANCE UNDERWRITING
CHARLESTON, SOUTH CAROLINA
APRIL 15, 2021
DRAFT MINUTES

The National Council of Insurance Legislators (NCOIL) Special Committee on Race in Insurance Underwriting met at the Francis Marion Hotel on Thursday, April 15, 2021 at 2:30 P.M. (EST)

Senator Neil Breslin of New York, Chair of the Committee, presided*.

Other members of the Committee present were (* indicates virtual attendance via Zoom):

Rep. Joe Fischer (KY)	Asm. Kevin Cahill (NY)*
Rep. Bart Rowland (KY)	Asw. Pam Hunter (NY)*
Rep. Edmond Jordan (LA)*	Sen. Bob Hackett (OH)

Other legislators present were:

Rep. Terri Austin (IN)	Rep. Wendi Thomas (PA)*
Rep. Jim Gooch (KY)*	Sen. Roger Picard (RI)
Sen. Stewart Cathey (LA)	Rep. Carl Anderson (SC)
Sen. Kirk Talbot (LA)	Rep. Kevin Hardee (SC)
Sen. Lana Theis (MI)*	

Also in attendance were:

Commissioner Tom Considine, NCOIL CEO
Will Melofchik, NCOIL General Counsel
Tess Badenhausen, Assistant Director of Administration, NCOIL Support Services, LLC

INTRODUCTORY REMARKS

Sen. Breslin stated that he wished he was there in Charleston but given the very stressful budget process in New York along with several other issues he just could not make it. Sen. Breslin then stated that he would just like to say a few words about the Committee, the agenda, and the format for today's meeting. First, Representative Matt Lehman (IN), NCOIL President, is unfortunately unable to join us today, but he should be commended for his work in deciding to form this Committee. We go way back in NCOIL history. We disagree in some politics but I recognize him as a bright and capable legislator and committee chair at NCOIL and I am happy to see him as president and I would be remiss if I didn't mention Asm. Kevin Cahill (NY), NCOIL Treasurer, who has been a terrific NY legislator and is on his way to becoming NCOIL president.

I think we had a great session in December but its incomplete and hopefully with the number of distinguished speakers today we shouldn't have a problem with competing our task after which hopefully the committee can later quickly arrive at some conclusions and recommendations. I'd be remiss if didn't mention that there is now federal legislation trying to I think improperly intrude on our responsibilities as a state based operation and as you know over the years it generally pops up that of federal government saying they are going to stick their head in here. Relative to

today we'll hear from speakers, then open up for questions, then break, then hear from more speakers followed by a committee discussion. As many of you know when I am a Chair of a committee I tend to not be involved in discussion as it moves it along quicker and we can finish on time.

RATING FACTOR/DISPARATE IMPACT DISCUSSION

David Eckles, Ph.D. Risk Management and Insurance Program Professor at the University of Georgia's Terry College of Business, stated that this is a very important issue and I appreciate the opportunity to lend a voice in a table setting role. When I was asked to set the table I came at it from two perspectives – one from your perspective of what is the usual ratemaking concern of legislators and regulators and these are all things you've seen before that premiums should not be excessive and they should be adequate to cover losses and most importantly for this discussion they should not be unfairly discriminatory. From an economist perspective which is where I come from we think about the same things but we think about covering speculative losses and the costs associated with them and buffering what we might need for rainy days and of course for stock companies with a profit motive, profit. And in theory if we have a really competitive market that should drive out discrimination as it should take care of itself but of course that's a bit naive and that's why we have you guys and discussions about this.

Where does discrimination come into ratemaking. In broad strokes, ratemaking in some ways is inherently discriminatory. Insurers go out and try to figure out what are the factors that are related to either the frequency of a loss or severity of loss and try to identify them and they can be your age, the kind of car you drive, where you live and those sort of things. Some of these factors may indeed create what's called a disparate impact and I think a really good example is for older individuals. It's pretty clear that the older you get the more likely it is that you are going to die, unfortunately, so you have to pay more for life insurance if you want a life insurance product but of course that creates a disparate impact for the elderly or for how you want to define old age. So while this is unfortunate it is not discriminatory in a malicious way it's just sort of a necessary outcome of the product that life insurers are selling. From a regulatory perspective, you have to sort of balance these real factors with those that are discriminatory so that's sort of the rub when you try to separate disparate impact versus discrimination or proxy discrimination.

I think it's important to point out that these are not synonymous at least in my mind. Disparate impact is a situation that results in a disproportionate effect, a negative effect, against a protected class while proxy discrimination might start off the same as there still might be a disproportionate negative impact but there also is a very important second part to this which is that the factor that is identified in the case of an insurer is intentionally used as a substitute for the protected class so it's not being used to appropriately price insurance but rather to specifically and intentionally discriminate against a protected class. As you can imagine one of these is easy to figure out while the other is not so it's pretty easy to see the result of disparate impact and the first half of proxy discrimination as is there an impact on a protected class and if we go back to the life insurance example yes older people are going to pay higher premiums. The question then is the rating factor being used to intentionally discriminate against in this case the elderly. This is very difficult to prove and in that way it's an unenviable task.

When it comes to your role or the role of legislators and regulators working together, it's important to remember a couple of things. One is that while disparate impact may exist you can solve that through legislation saying you can or cannot use certain rating factors which is a relatively easy solution. Proxy discrimination is something you can consider already under your

purview and when we started this discussion one of the things and goals of regulators working in tandem is to work on unfair discrimination and that would be proxy discrimination so in some ways this is something that is already done or at least is intended to be done but is often time consuming and until recently the idea of proxy discrimination was undefined. That's what the NCOIL recent definition is intended to do is to provide a definition of proxy discrimination. That concludes my comments but I'll leave you with a reminder that proxy discrimination and disparate impact are not the same thing and it's important not to equate the two and disparate impact is an unfortunate consequence but it can be solved through the legislative and regulatory process and proxy discrimination is unfortunate and not good but is harder to figure out and is already sort of under the purview of legislation and regulators.

Peter Kochenburger, Executive Director, Insurance Law LL.M. Program; Deputy Director, Insurance Law Center; Associate Clinical Law Professor at the University of Connecticut Law School, stated that the topic I have is one aspect in part of disparate impact analysis and unfair discrimination and what that might mean but it's also discrete from that as well and we know a few things. One is that it's been used for a long time. Two is that this info is increasingly available as jurisdictions, local and state, making the information public in a legal sense. Third is related to what we've been talking about for years with big data and predictive analytics is that it can be used and is used in more sophisticated ways that many of us are not sure how. These are some of the examples of companies, such as LexisNexis and Transunion which are very familiar to us and I don't pretend to have an exhaustive list in my field or here as it's somewhat surprisingly difficult to get a sense of how criminal history is being used. Professors don't have subpoena powers which is probably a blessing for the rest of the world but is frustrating for us.

There are two issues to focus on. One is whether the information is being used accurately in other words at a fundamental level is the criminal record accurate – is it a mistake or is it someone else. But more important for our purposes is that criminal history is not static and it changes and how are those changes captured in an underwriting or claim model if at all. And then the second major issue is should criminal history records be used at all, with some narrow exceptions, given some of the problems we'll talk about but also given the rise in other risk factors we hear about all the time in the increasing number of risk classifications and the use of non claims data and non-underwriting data and social media and shopping habits to create a predictive risk model and given this would there be any measurable loss if we stopped using criminal history.

For the first it's a discreet issue to consider before going to the larger issue and that is arrest and conviction records are not static. With an arrest record charges could be dropped or the defendant could be acquitted or even if there is a conviction while it varies by state as states have a variety of ways in which a record could be sealed, a juvenile record for example if its ever even open but also for accelerated rehabilitation often for minor crimes and drug offenses in which that record is considered by law no longer to exist except for some limited purposes which do not include as far as I know insurance underwriting. Here is a diagram that hopefully illustrates this and that is the search engine finds a criminal record and it doesn't have to be a conviction it can be an arrest. Then the person pleads guilty but the nature of the offense is such that the person is given a fresh start and the record is sealed or expunged depending on the state and cannot be used. It was an accurate record in the beginning but became unusable in theory and law but perhaps not in practice once there's a fresh start or substitute for fresh start once the fact that if the person is acquitted or the charges are dropped. But what happens then when there is a fresh start or the record is sealed – will the protocol in the search engine detect the absence of a criminal record and modify my profile so in the beginning I have many negative things going on and presumably I would be charged higher for insurance but now the

record is sealed and the idea of a fresh start is that it doesn't affect me anymore. Does the initial criminal arrest simply exist for the rest of my life to be used in model after model? In fact the model that captured it or models because there's more than one changed and does it make a difference and of course it does because increasingly we know the effects of a criminal record on employment and education and income and other areas so it matters how a record is used and do we know how they are being used and by we it's not so important that I know its important the individual knows but its really important that insurance state regulators and legislators know how this information is being used because otherwise the use of the information operates out of not an evil intent but in darkness and that's increasingly a problem.

The bigger issue is should the criminal history be used at all and we know a couple of things. One is that the criminal justice system in the U.S. from the police all the way through the prosecutors and defense and prison system and parole system – we have a very harsh system compared to many other areas in the world in terms of the numbers of people incarcerated. So we have the fact that criminal history data may be being used more often and may be being used in perpetuity that our system overall generates a significant amount of arrests and convictions and imprisonment along with the fact that we also know that there is a disproportionate effect on different groups particularly by race but not exclusively. Quickly some background information, over 10 million people were arrested in 2019 according to the FBI however some people were arrested more than once so the number could be lower but this is one year and each year the numbers have been roughly similar and have been as low as 7-8 million up to 11-12 million but the point is that and this is an estimate which I think is extraordinary one third of adult Americans overall in the U.S. have a criminal record which can be an arrest or conviction. The point there does includes infractions, traffic offenses and other violations normally it would be who cares and typically we don't care that much after we pay the fine but these things are also being caught in search engines and being utilized presumably not as serious as a felony but being utilized in risk classification and the disparities are not only in arrest but also in these minor infractions.

The U.S. is far above any other country in terms of prison population including China, Brazil, Russia and India and with due respect to those countries they are not countries I don't think we would want to model our criminal justice system off of and yet we imprison more and there are problems with all of these numbers in terms of reporting but nevertheless they are stark. As of last week, the federal prison population has African Americans more than double or triple any other race. To think about this again, this is a problem not simply because there is disproportionate police or a criminal justice system that disproportionately arrests and incarcerates African Americans – that is a significant problem but its also a problem for all of us with the fact so many Americans are estimated to have a criminal record. We also know points about the disparate nature of criminal record history. Nothing can be neutral police record and court actions and judicial actions can and often are even if not intentionally are biased and disproportionately affect the poor and African Americans and other people of color and this is something that is not new to our country and more importantly has become more apparent. In 2020, systemic racism issues became clear as shown by the death of George Floyd and the trial continues. The following quote from the CDC illustrates that the effects are beyond periods of incarceration and beyond insurance and employment to reach significant health effects – “Unfortunately, discrimination exists in systems meant to protect wellbeing or health. Examples of such systems include health care, housing, education, criminal justice, and finance. Discrimination, which includes racism, can lead to chronic and toxic stress and shapes social and economic factors that put some people from racial and ethnic minority groups at increased risk for COVID-19.”

There is also a question of what the insurance sector which includes legislators, regulators, brokers, agents, 3rd party administrators academics, what is the responsibility. We cant solve the underlying problems and nor should we be paralyzed as some from industry have suggested recently that we should study everything so we understand it. But we can do something to first of all understand exactly how criminal history information is being used and then restrict the use to only those areas where its absolutely necessary or where the nature of the criminal conviction is specific to the type of risk being underwritten such as convictions for insurance fraud as nothing is absolute and I don't suggest this should be. One area can be legislators evaluate and then limit or eliminate specific instances of how criminal record history can be used. In other words a prescriptive approach and that may be necessary or appropriate but I have a more limited goal and that is to work with the industry and given these facts we've talked about to see if industry would voluntarily suspend use of criminal history data for several years in personal lines both so that the issue could be studied without potentially further harm occurring and also to see what effect on markets doe it have. I suspect and I'm not an actuary that it would have very little given the other risk factors we have but the value of doing so is significant.

Julia Angwin, Editor-in-Chief of The Markup, stated that I will mostly be talking about the coverage I have done of race and insurance underwiring. I'm at a nonprofit called The Markup but the work I'm going to be talking about was something I did when I was at ProPublica a few years back and it was a study of insurance pricing and the fact that it varies by zip code and there have been a lot of anecdotal concerns for years that minority zip codes were charged more so the same safe driver in a minority zip code would have a higher insurance premium and the question was that justified by risk and that had not been answered as far as I knew. It had long been observed that there were these differences and that it had impacted primarily communities of color so I decided to see if we could figure out whether these price differences were truly justified by risk. We went and got quotes by zip code for multiple insurance companies by zip code and bought them from a company quadrant along with partners at Consumers Reports and we used those quotes and compared them to the risk data that we could find. We filed public record requests in all 50 states for liability payouts per zip code. Only four states gave us that data while all the other states said they didn't keep that data and so we were able to do the analysis for CA, MO, IL, and TX. And then we compared what the payouts were per zip code and what the premiums were per zip code to see whether there were disparities and we did this for one specific profile to make sure it was consistent so it was a 30 year old female teacher with a bachelor's degree. We looked at those policies from various insurers in all of these different jurisdictions and we came up with charts that showed the ratio of the prediction in minority neighborhoods versus non minority neighborhoods so when you see something that's over 1.2 we consider that basically a 20% difference between minority and non minority neighborhoods and those are what we thought was worth looking at.

We charted them for each and every company per state so it was a lot of charts but what you can see is that most looked like the payouts on the x axis so that's how much insurers were paying out per zip code and the premiums were on the y axis and what you see is a pretty straight comparison of the minority neighborhoods in red of a pretty linear progression of whereas payouts go up premiums go up so that's something you would expect to see but what you don't expect to see is what we saw in the whiter neighborhoods which is the premiums declined in the higher payout areas so even though payouts were higher for some reason premiums went down toward that far end of the range and that was pretty consistent throughout all of the places where we saw disparities that there was this strange decline in the whiter neighborhoods. We published all of our data and you can see all of that on the ProPublica link.

This isn't just a theoretical issue so I went to Chicago and did some reporting about how this affects a regular person. Otis was paying \$190 per month for Geico and had no accidents completely safe driver but he lived on the west side of Chicago which is a heavily black neighborhood and his rates were much higher than Ryan who lives across town who lived near Wrigley park and had an accident and he was paying \$55 which was surprising and also Geico. When I looked deeper into their rates you could actually see that the property damage base rate was the difference and for Otis' zip code the base rate was \$753 a year for the premiums and in Ryan's neighborhood the base rate was \$376 so that was a huge disparity but actually the difference in payouts was completely minimal a \$12 difference over three years in those two areas so that's sort of the difference in risk that was unexaminable with consistently penalizing minority neighborhoods so those are the findings we had in that story which I think raised the question of whether the use of zip code really was justified because it seems like its actually pricing in something other than true risk and it seems like its being used to identify minority neighborhoods and penalize them in many cases.

As you may or may not know CA did require insurers to adjust rates after that story came out. I'm not sure if there has been other action in the other states. After leaving ProPublica I started The Markup and we cover the impact of tech on society and the first story we launched was also an analysis of insurance. We looked at Allstate's algorithm which is called a retention model which attempts to price in whether people are more likely to switch to another insurer so they add a retention factor at the end of their analysis and we found a filing in MD where they actually described how the retention model would impact every single rate payer in the state and we were able to reverse engineer the algorithm and we showed via decision tree that it was a very interesting algorithm and it actually looked at how much you were paying so if you were paying \$1,900 or more they assumed that you were indifferent to price and gave you a much higher increase and if you were paying less they assumed you were price conscious and didn't give you as much and the reason I bring this up in this meeting is because there was a race impact as basically the higher rate increases primarily impacted middle aged people, men and communities that were non white so there are times when there are disparate impacts of other than race I thought it was worth noting that race is one of the factors that was affected when you put together these complex models that basically are not related to peoples actual driving.

Daniel Strigberger, Esq. of Strigberger, Brown, Armstrong, LLP, stated that I am going to talk about interesting developments in Canada with respect to underwriting for auto insurance specifically in using issues such as age and marital status and sex to determine underwriting premiums. Just to give you a little bit of an overview in Canada the human rights law at a federal national level is contained within a document called the charter of rights and freedoms which is a constitutional amendment federally and it went into force in 1982 and basically that charter guarantees human rights and freedoms and the like to all Canadians it doesn't matter what province you are in and the only catch is that its only with respect to involvement or incidents with federal or private agencies and gov't's and so on including police departments anything where a federal or provincial law infringes on one's rights then that is dealt with in the charter. At the provincial level and in Ontario specifically human rights is contained in a piece of legislation that is known as the Ontario human rights code and it provides protection to all residents of Ontario and all people in Ontario the right to not be discriminated against based on various protected grounds which include age, ancestry, race, citizenship, family status, marital status, sex and sexual orientation and there are others as well.

Like most pieces of legislation both the charter and Ontario human rights code have exceptions and the one that is contained in the Ontario human rights code deals with reasonable and bona fide grounds for acts of discrimination. To give a quick overview of auto insurance in Canada,

some provinces in Canada have a government insurance so there is basically one auto insurance company that provides all the 3rd party liability and any first party benefits of property damage and anybody who has a drivers license or registered vehicle in that province is automatically enrolled into those policies with the one insurer. Those aren't as interesting as the other provinces including Ontario, Alberta and some others basically its private insurers like Allstate and Travelers who are responsible for insurance and when I say responsible I mean those are the companies that sell auto insurance in the provinces. Auto insurance is highly regulated at the provincial level and next to life insurance is probably the most regulated kind of insurance and every company it doesn't matter which company sells in Ontario but it has to sell a standard auto policy basically a one size fits all that's standard across the province and its written by the superintendent of insurance and it has mandatory first party benefits and 3rd party liability limits of a minimum \$200,000 and a couple other coverages.

Insurers who are selling these products have their underwriting rating and classification systems approved by their respective regulators and they have to file these underwriting guidelines periodically and insurers usually determine risk classification based on various factors including obviously the type of vehicle being insured, the location of the vehicle and the drivers of vehicles and I'll be focusing on the drivers of vehicles. In Ontario legislation says that no element of a risk classification can use several factors for example an insurer that is classifying its risk and writing a policy cannot determine premiums based on the insureds income, employment history, credit rating and physical or mental health however there is no prohibition against using factors such as age and sex. This takes us to a Supreme Court of Canada decision from 1992 known as Bates and Zurich insurance and what happened was that the insured Mr. Bates was under 25 and a male driver and he was single and he brought a discrimination matter under the Ontario human rights tribunal against Zurich saying he was being discriminated on because he had to pay a higher premium for essentially being under 25, male and not married. He made a comparison to young, single, female drivers, young married male drivers or any driver that was above the age of 25 who was not charged any different premium just based on those criteria so he alleged that there was a violation of his right to contract with an insurer on equal terms without any discrimination and of the right to equal treatment in the kinds of services that he was trying to obtain.

Interestingly the insurer at all levels of the dispute conceded that their practices were most definitely discriminatory so there was no issue that they weren't discriminating based on age and sex and marital status but they argued that this was one of the exceptions and the code says that there is an exception and that you are allowed to discriminate if its based on reasonable and bona fide grounds so a rate classification system for example which discriminates on the basis of prohibited group characteristics is reasonably necessary to ensure the efficient operation of the insurance system and this is what the insurer was arguing. It went to the tribunal and it held that it was discriminatory and made its way up to two appeal levels and at the Supreme Court of Canada level the court was split as there were seven judges hearing and five agreed with the insurer that it was discriminatory but it was within the exception provided meaning that they were doing what they were doing because there was no other way to basically collect that kind of info and assess risk for the group that they were assessing. A considerable portion of the analysis was devoted to availability of having a practical alternative so for example the court concluded that at the time the claim was brought there were no practical alternatives to rating drivers on these protected ground such as age sex and marital status and recall that the case came up in 1992 but the actual complaint was brought earlier in the mid 1980s. The court said that this did not mean that there would never be practical alternatives and it said that the insurance industry must strive to avoid setting premiums based

on these grounds that they are not allowed to and left the door open for some day determining premiums for example male drivers who are under 25 and single.

This was met with a dissent by two judges and those judges held that there was an alternative to using the discriminatory classification system and basically the way they looked at it was that the premiums of drivers over 25 were set according to completely non discriminatory classifications so they held that given that there was this alternative to decide these premiums for over 25 and there was no evidence according to the judges that they could not adopt a similar rating system for people younger than 25 so they held that they didn't agree that there wasn't a practical alternative. So where this takes us now is to 2021 and if there are any kinds of practical alternatives to determine these rate classifications and what we're seeing more and more here is the use of telematics and usage based insurance (UBI) products and so a lot of insurance companies here are starting to offer drivers the ability to take this little black box device that you plug into your car and it measures things like speed, braking response time and other things about driving that they probably don't tell you however its offered to and sold to people as a way to pay lower premiums and basically if you drive better then your premiums will reduce and there is a problem with those little boxes in that they are plugged directly into the car so they don't know who is driving so you could have several drivers in a household and if one driver is a lousy driver while the others are good drivers the insurer wont necessarily know who is driving so it comes with its limits there.

Other insurers are starting to sell applications for smartphones where basically its not tapped into the car per se but it does measure things like speed, location and things like that as well and some of them talk via Bluetooth to other devices you can plug into your car as well so they do talk to each other that way so I think the question is this something insurers can use as a practical alternative to determine premiums for certain groups who otherwise would have been discriminated by previously. I wrote an article about the Bates case and this issue in 2016 and at the time there were no cases that had revisited that with respect to insurance and now in 2021 that is still the case with respect to insurance however I anticipate that this issue is going to come up again soon because of the fact of with the existence of telematics and technology specifically that there must be ways to really focus on in on drivers for rate classifications as opposed to just collecting everybody into groups.

Asm. Kevin Cahill (NY), NCOIL Treasurer, thanked Sen. Breslin for his effort in leading this charge as these are important issues but I would suggest to the entire body that this is likely not the conclusion of this issue and its something that is ongoing and that was a point that came home to me even more so when Ms. Angwin spoke and it appears that everything that we've experienced to date when actuaries were pencil pushers will be exacerbated and magnified and multiplied in the information age when there is so much more data so that brings me to my question to her - do you believe based upon your analysis that technological innovations of the last several years and the growth of the amount of information available in the past several years will serve to make the premise of discrimination in insurance worse or will it have no effect or will it give us tools to ameliorate it. Ms. Angwin stated that I am really not a policy person so as a journalist who is observing this industry what I would say is that the thing that was so surprising to me is that the if you're trying to measure risk of an accident and whether you're going to have to pay out for an accident a lot of the variables just don't seem like they should be relevant like zip code or if you are likely to shop around for another rate so the inclusion of additional data like that shows discriminatory effects in my reporting and the explosion of big data means that more things like that are going to be included but I would say that algorithms are adjustable and you can adjust them however you want and one things that's really nice about the world of algorithms is that if you want to tune it and remove racial bias you can so it

gives you an opportunity to do that. I'm not the person to tell you how that can happen but it can go either way and I do think that its troubling when you see variables in ways that it seems unintentionally discriminatory.

Asm. Cahill stated that brings me to my question to Mr. Strigberger regarding the exclusions written into law – I didn't hear you talk about race did you mention that? Mr. Strigberger stated that with respect to auto insurance regulation in Ontario with respect to risk classification there are no prohibitions against using factors such as age and sex and race as well. However, insurers don't at least I'm not aware of any situation where they have gone that far to use race as a condition. I know that there are some potential allegations that's being done because there are some neighborhoods outside the Toronto area where there are a lot of claims coming in and they are looking at it not from an underwriting perspective but from a claims perspective asking why are we getting so many claims form this town outside of Ontario and it just so happens to be a township with a lot of southeast Asian residents so there have been some rumblings in the news about how to deal with that but no there is no restriction about race.

Asm. Cahill stated that I would probably reach the same conclusion you did that there are no or very few companies that say here is our rate for black people and here is our rate for people of Asian descent and for white people. I think that they might not put that in their rate filing unless the Sackler family decides to lave pharmaceuticals and get into insurance in which case there would be some internal memos that would say that and they wouldn't necessarily put into the rates but what we're talking about here is proxy discrimination and that brings me to your presentation on the categories that were excluded - were they excluded because they weren't actuarially sound or were they excluded because even though they had an actuarial value or could be perceived as having such public policy mitigates against – is it the latter because my sense is that it is. Mr. Strigberger stated that the overall piece of legislation is the human rights code of Ontario so much of these acts even though they are not excluded form the auto legislation most of these would be discriminatory anyway so the issue in the Supreme Court case was the court saying there were no practical alternatives but also that it fit within this bona fide reasonable exception so the criteria that the auto insurance legislation is explicitly targeting to me it looks a ;lot like its level of income, employment history, education and occupation and credit rating and credit rating was dominating the news recently because the allegation was that if people had a poor credit history then they are more likely to default on premiums and also be more high risk drivers. There seems to be a lot of moving targets here in terms of where this is all going. Asm. Cahill asked if the Canadian law or Ontario law specifically mention intent or is it just a blanket prohibition on discrimination using the factors. Mr. Strigberger stated that there is subjective competent so in the Zurich case they held that the insurer was being discriminatory but it was being done in good faith – they weren't being discriminatory for any malice or anything like that. It was intentionally discriminatory but there was a good faith element to it. If there is evidence that the insurer was doing it because of systemic racism or whatever the case is then they wouldn't get to use the exception. The objective component in the Supreme Court case was based on the use of practical alternatives. So intent plays into it but its not so much if its intentional or not it has more to do with why you were doing it.

Asm. Cahill asked Dr. Eckles in your demonstration in the difference between disparate treatment and proxy discrimination you made the point that was widely discussed at our last meeting about intentionally leaving out willful or negligent or known non willfulness that is things that might be known or things that might be perceived or things that might be of grave risk and some have opined that might equate to proxy discrimination – do you believe there is a need for an affirmative demonstration of intent before a demonstration of proxy discrimination is obtained? Dr. Eckles stated that I think if you are thinking of proxy discrimination as I thank of it

as something that in the insurance context that a factor is being used to discriminate I think there is intent so it would be instead of just explicitly having a race you use zip code as an intentional way to get around that race not being allowed and using that as a sort of proxy for race so I think in my mind there would be intent needed. The Committee then took a 10 minute break.

Jim Lynch, Chief Actuary and Senior VP of Research and Education at the Insurance Information Institute (III), thanked NCOIL CEO Cmsr. Tom Considine, Rep. Lehman and the staff at the NCOIL for giving us the opportunity to speak on this important topic. The III commends the efforts at NCOIL to try to understand and address today's topic. Like NCOIL, the entire property/casualty insurance industry – companies, academic researchers, regulators, trade associations – has been focusing on this important issue. It seems clear that all parties sincerely want a more equitable society, and working cooperatively we can find solutions that address the issue of systemic racism while preserving the competitive environment that allows the insurance industry to keep its promises and protect its customers. At the same time it is important that the discussion be based on thorough, fact-based research. There are quite a few of these going on, as I will discuss later. III has been asked today to comment specifically on research conducted under the auspices of Consumer Reports magazine. Consumer Reports has a well-deserved reputation for rigorous, independent product testing. Unfortunately, in this particular case, its research fell short.

The study, conducted in conjunction with ProPublica in 2017, attempted to be rigorous. It purported to find “substantial disparities in auto insurance prices between majority white and majority nonwhite neighborhoods. These disparities [it continued] were larger than risk levels could explain.” The study, unfortunately, made elemental errors that, once corrected, showed the exact opposite of what ProPublica asserted: auto insurers charge prices that properly reflect the actual risk in majority white and majority nonwhite neighborhoods. There are certain things it is important to know about rating variables: First: They work. They are effective at gauging the likelihood that a customer will be in an accident. Second: Every rating variable has been proved effective through actuarial analysis of actual data. Third: They are filed in advance with state regulators, along with statistical proof of their effectiveness. And they can't be changed without similar statistical analysis. Fourth: Companies constantly review how effective these factors are. If they don't work in the real world, they are adjusted or abandoned.

Last but certainly not least: The setting of private-passenger auto insurance rates is a color-blind process. Insurers do not gather information based on race or income, nor do they discriminate against anyone on the basis of race or income. The ProPublica study, published in 2017, alleges that auto insurers systematically price-gouged minority communities and areas with predominantly low-income households. In their words, “some major insurers charge minority neighborhoods as much as 30 percent more than other areas with similar accident costs.” That charge is simply inaccurate. Researchers, regulators and policymakers took the allegations seriously, examined them from different perspectives and in each case concluded that ProPublica got the analysis entirely wrong. ProPublica looked at ZIP code level auto insurance losses in four states where that information is publicly available. Their researchers fit a complicated mathematical model to those losses and compared the model's predictions of losses to the premium that a hypothetical driver would pay in those ZIP codes. They found “many of the disparities in auto insurance prices between minority and white neighborhoods are wider than differences in risk can explain.” III, like many insurance organizations, were concerned about the charges. If true, they would paint a damning portrait of the entire property/casualty industry.

Ill hired a highly respected actuarial firm, Pinnacle Actuarial Solutions. Their overview of the ProPublica study found “multiple concerns with the analysis and resulting conclusions.” The most prominent: ProPublica didn’t properly handle ZIP codes in which there wasn’t a lot of data. The branch of mathematics that deals with thin data in insurance is called credibility, and it is part of the standard actuarial curriculum. As far as we can tell, ProPublica did not make this standard actuarial adjustment. It is actually not too hard to determine whether pricing models charge exorbitant amounts in minority neighborhoods. You just need to look at the losses incurred and the premiums earned in those neighborhoods and compare them with the losses incurred and the premiums earned elsewhere. The metric to do this – and I think many of you will recognize it – is the loss ratio, which is losses divided by premiums. If ProPublica were correct, minority neighborhoods would have loss ratios substantially lower than other neighborhoods. People buying insurance there would receive less back in loss payments per dollar spent than would those in other areas. Lower loss ratios in minority neighborhoods would be evidence of unfair discrimination. Let’s see what that simple, powerful analysis shows. Here, an insurance trade group used the same loss data ProPublica got, and the actual premium data that corresponded with those losses, which it got from state regulators.

This shows Chicago and the rest of Illinois separately because ProPublica focused on the state this way, and the two areas are quite different, in both demographics and traffic patterns. In both cases, the loss ratios are quite close. On the left, minority neighborhoods posted a loss ratio of 55 percent, meaning that for every dollar of premium policyholders paid, 55 cents was used to cover claims. That’s slightly more than happened in other neighborhoods, where 53.8 cents of every premium dollar was used to pay claims. So in Chicago, people in minority neighborhoods actually got a slightly better deal since they received slightly more of their premium back to handle claims, though the difference is pretty small and likely due to chance. In the rest of Illinois, the situation is similar. Minority neighborhoods posted a loss ratio of 57.2 percent, just a little less than other neighborhoods. Again, the results are close. There is nothing approaching the level of overcharging that ProPublica’s analysis implies. In fact there is no evidence of overcharging. Slide three shows results in two other states where ProPublica found discrepancies, and again you can see that when you look at real data, there is no evidence suggesting any accusations of rate disparities that ProPublica alleged. ProPublica got the analysis entirely wrong.

The state of Missouri did its own, more comprehensive analysis and concluded that “No evidence was found that would indicate that higher rated territories are charged more relative to risk than lower-rated territories,” adding in a footnote, “ProPublica got the analysis entirely wrong.” Remember a few moments ago, I pointed out that the biggest mistake ProPublica made was failing to make standard actuarial adjustments to the data. What would happen if you used ProPublica’s methods, but adjusted them appropriately? California regulators actually did this. They used ProPublica’s modeling to look for discrimination in individual rate filings, but they made the appropriate actuarial adjustments. California classifies neighborhoods as underserved and non-underserved, but those terms align closely with minority and other neighborhoods. Slide 5 shows the result of that. These are two examples from actual filings from actual insurance companies and I took out the name of the companies but in the first, the underserved are charged 25% more than the non underserved they also experienced losses 40% more than the non-underserved and in the other example all of the underserved are charged 25% more than the no underserved the underserved experienced losses 27% more than the non underserved. In both cases, using actual data from actual filings, the Department of Insurance found that the areas in question paid considerably more for insurance – but that they also had considerably more expensive claim costs. This was consistent with the loss ratio analysis in Illinois, Missouri and Texas that we just looked at. It was consistent with what Missouri

regulators found. The groups that pay higher insurance bills are higher risks to the insurance company. That's the way insurance is supposed to be. And it's another way of saying that ProPublica got the analysis entirely wrong.

The growing awareness of historical injustices make these unprecedented times. As the insurance industry, along with the rest of America's business and governmental institutions, examines past injustices and appropriate remedies, it makes sense to incorporate high quality, relevant research. Committees of both the Casualty Actuarial Society and the American Academy of Actuaries that are examining the matter. The NAIC is conducting research. The Insurance Research Council, which recently began a closer relationship with III, is looking into the impact of insurance credit scores and race. I'm sure that we all welcome such sober efforts in our united quest to create a more just society. At III, we would strongly recommend any insurance policymakers or regulators look to research from organizations that have a credible, long-term commitment to understanding and improving the insurance industry. We would recommend you avoid overemphasizing the work of those who, though well-meaning, lack the grounding in property/casualty actuarial techniques, and therefore can reach incorrect conclusions that could have far-reaching, detrimental impacts. Thank you again for allowing me the opportunity to speak today. I welcome any questions you might have.

Tom Karol, General Counsel – Federal at the National Association of Mutual Insurance Companies (NAMIC), stated that I've been asked to speak about the standards for disparate impact that have been set up by Supreme Court and how they may impact state laws. III attempted to be neutral and educate and not and advocate but in fairness I must disclose that I have been NAMIC's lead lawyer in challenging some federal gov't disparate impact rules for several years. The lead case to talk about is community affairs Texas Dept. of Housing and Community Affairs v. Inclusive Communities Project, Inc., 576 U.S. 519 (2015). There were earlier cases and several Supreme Court challenges regarding disparate impact but Communities was the one case that finally made it to the Supreme Court to deal with some of the clear issues. I must make clear that Communities didn't involve insurance directly but did provide specific legal standards and performed a legal analysis of disparate impact and it would be prudent for state legislators and regulators to understand and appreciate the Supreme Court analysis and reasoning prior to adopting any disparate impact legislation or regulation.

There was some discussion earlier about disparate impact and disparate treatment. Both have legal definitions for illegal discriminatory practices. In contrast to a disparate treatment case where the plaintiff has to establish that there was a discriminatory intent or motive – the memo that was referred to earlier as well the writing things down – a plaintiff bringing a disparate impact claim must show that there is a disproportionately adverse effect on minorities that is not otherwise justified by a rational basis so disparate impact does not require intent at all and there are other terms that have been used like differential impact and disproportionate impact and others but these are not legal definitions and not a actionable so the import thing to do is focus on disparate impact which does not require intent and disparate treatment which does. The Court in Communities recognized that there was disparate impact that would not subject the practitioner to liability and the Court basically said that disparate impact liability must be limited so that other employers and regulated entities are able to make practical business decisions and choices. It did not go so far as to say there was good disparate impact but it did recognize permissible disparate impact.

The Court reasoned that there were proper limitations on disparate impact liability. It said that its properly limited to avoid serious conditional questions. It cannot be based solely on a basis of statistical disparity. If a population of a protected class is x the fact that the impact has been

different than that number doesn't necessarily by itself show disparate impact and the Court warned that without adequate safeguards disparate impact might actually lead to cause race and other protected classes to be considered in a pervasive way and lead to numerical quotas and serious constitutional questions. So its not just the numbers – the numbers are a starting point but numbers alone don't get you to the point of liability. The Court articulated cautionary standards concerning disparate impact and these were specific to the Fair Housing Act (FHA) and Title 7 and presumably other laws that would mandate only the “removal of artificial, arbitrary, and unnecessary barriers,” and not the displacement of valid policies so that basically in order to prevail with a disparate impact case you have to show the practice is artificial and made up and arbitrary and has no basis and is totally unnecessary – fairly high standards to show that basically variations from a numerical equilibrium is not itself a violation as there has to be some disparate impact that is caused by a policy that it is not all rational or necessary. The showing of racial imbalance would not without more establish a prima facie case of disparate impact. The plaintiff must prove a robust causal relationship between a practice, not just one action but existing practice, in any statistical disparity so it's a causal connection you have to tie the action that's being alleged to causing the disparate impact to the disparity and then show that it's not just a one time action but in fact a practice.

Even if these elements are shown a defendant can still prevail by showing that the challenged policy is necessary to achieve a valid interest - kind of an accidental discrimination if you will as a gov't entity or business is doing this and didn't mean to cause the disparity in statistical variations but basically is doing it for a good reason. Once they establish that all of the above is a finding of disparate impact. If the court applying these standards determines its improper disparate impact the next step which is very complex is the remedy. How do you change the policy. You can find the liability but to get rid of the underlying discrimination following the finding that there is disparate impact you have to basically say that there has to be a less discriminatory alternative. Basically either the court or plaintiff has to come up with that and say rather than do what the company or gov't entity is doing they have to do it a different way and indicate how the burden would be less so they have to come up with a replacement less discriminatory policy that could provide the necessary business or gov't functions and still have a less disparate impact. It's very difficult to do and show particularly on the plaintiff side where they may not fully understand the purpose and policy and operations of the existing policy being challenged.

Here is a very brief overview of the requirements that would be required by the Supreme Court – Communities does not explicitly require any state insurance disparate impact law to comply with any provisions stated however its a virtual certainty that if state insurance disparate impact law is enacted and it doesn't comply with Communities it will be subject to litigation challenges and will be challenged in courts so states that ignore Communities in enacting disparate impact laws do so at their own peril.

Mallika Bender, FCAS, MAAA, Co-Chair of the Casualty Actuarial Society (CAS)/Society of Actuaries (SOA) Joint Committee on Inclusion, Equity and Diversity, stated that I was asked to come here today to give a brief overview of CAS' approach to race in insurance pricing and our goal in CAS is to equip actuaries to be able to address some of the issues around race as it relates in particular to insurance pricing. To that end, we've laid out activities in four different areas including leadership, collaboration, education, and research and these areas are interrelated to the extent that one allows us to do the other and I was going to talk a little more about some of the areas of research we are doing. The efforts that we're looking at in terms of research I would put into two general categories one being a foundational knowledge to equip actuaries for discussions like today around systemic racism really understanding and defining these different

terms like bias and fair and unfair discrimination and disparate impact and the implications on insurance because as you've seen there are many different ways and ideas to use those terms in the general public so we want actuaries to have a good understanding of the technical terminology. It's also important to look at the actual historical influence of systemic bias and racism on the underlying insurance data so how we end up with unbalanced distributions in credit score by race or highly separate zip codes allowing actuaries to understand what's caused those underlying distributions to be unbalanced will help us to understand and develop solutions potentially.

We're also looking into actions taken by other industries including banking and financial services to address the presence of disparate impact or other systemic racism issues and we're looking at analysis of outcomes from actual historical regulations and legislation around the use of specific rating factors in other jurisdictions so for example if a state or province has limited the use of credit or gender like in the EU we'd like to understand what the market outcomes are of those to better understand what might happen in the future. That brings me to some of the forward looking research that we have planned one of those is stress testing rating models for the outcomes if different rating factors were limited or prohibited under legislation or regulation and what changes in positive or negative ways as we might expect that if a rating factor is removed from a plan that other rating factors might pick up that signal so its not going to be cut and dry positive or negative influence there may be a grey area. We also like to proactively deliver actuarial methods for measuring and quantifying disparate impact with the next step being to understand what potential solutions are out there and could be developed to address this concern. As mentioned earlier there is quite a bit of new technology being used in actual practice and insurance in general like artificial intelligence (AI), telematics and UBI and we are starting to reach what are the positive or negative or neutral impacts in rating that could arise from the uses of those new technologies or shift toward those new technologies.

We are looking for collaborators for a lot of the project because as one of the themes discussed today the use of data and the availability of data to conduct these analysis its so important getting the right data and being able to apply actuarial techniques so we're looking for collaborators and different sources of data to conduct this research in the coming months and years and we're looking forward to having more to report and share as we delve into this further. I should also say that the CAS is also not a public policy organization so we're not producing this to necessarily influence public policy but more to educate our members so they can be active participants in the work ongoing in the industry.

On behalf of the American Council of Life Insurers (ACLI), Andy Kramer, VP and Chief Underwriter at M Financial, sated that I'll be talking today about a basic overview of the life insurance industry and the evolution that has accelerated in the last year because of the pandemic. The objective here is to discuss the different types of insurance for life underwriting and the trends we can expect and when I say life underwriting I'm referring to not just life insurance but also disability and long term care (LTC) so the agenda today will discuss the differences between life insurance and P&C as the typical consumer puts all insurance in the same bucket but there are significant differences between life and P&C but I just want to point some are pretty obvious but they have a big impact about the life underwriting process and then we'll talk about the different types of life insurance underwriting - Guaranteed/simplified issue; Traditional full underwriting; and the late entrance to the game newcomer Accelerated underwriting which has made great strides in the last year because of the pandemic.

For the difference between P&C and life, on the P&C side generally the coverage is required whether it be auto liability required to license the vehicle or homeowners as a condition of the

loan agreement and because of that we have a much lower risk of adverse selection and when I use that term I'm talking about when an insurance company extends coverage to an applicant who's actual risk is far greater than they had expected based on the info that they had or put another way people of a higher risk generally want to purchase more coverage because they can get it at a cost lower than what they think is equitable. On the life insurance side, coverage is optional and that's where you get that potential for increased adverse selection. On the P&C side you can price the risk on a periodic basis whether its 6 or 12 months depending on the risk but with life insurance you only get one chance and there's no change to that rate or price to match the increased risk profile so if you underwrite someone today and they develop cancer or a heart condition you can't change the price as it's a unilateral contract. On the P&C side the loss amount is unknown but the loss event horizon is fixed it's the 12 moth policy period but on the life insurance side the loss amount is known its fixed on the face amount but the loss event horizon is unknown as there are changes in interest rates and all other environmental changes that can occur between now and when the eventual event occurs.

In the P&C world the profitability can be determined pretty quickly as at the end of the year you add up the premiums and subtract losses and expenses and incurred but not reported claims and you have a pretty good estimate of losses or profits but in the life insurance space you've got to estimate all of the future premiums and take the present value of that and estimate all the future losses and take the present value of that so there are a lot of moving parts and its difficult and it takes years to measure the profitability of a book of business to understand if you made the right underwriting decision on the book or not so understandably a lot of the life insurance world there is a lot of hesitancy to move forward and drive change as its probably one of the most least changing industries in the marketplace. Also, investment return is a key driver of profitability because of the long term nature of the business and a key component of the pricing calculation is the interest rates that you are assuming on the investment portfolio that you've taken out to cover all future losses.

As mentioned, underwriting at the time of the application is critical and it's that process of classifying all of the risks by the risk of that person either dying prematurely or becoming disabled or needing LTC. By law we must be able to demonstrate that similar risks are treated in a similar way and its actuarially sound and reasonably anticipates experience. The goal is to have similar risks priced with similar premiums and the key benefit of full underwriting is that it enables insurers to make products widely available and affordable at the lowest possible cost as if it wasn't for underwriting you wouldn't be able to have people protect 10 or 20 years of future income for income protection coverage. For example, in the final expense market sometimes known as burial insurance you have two different types of coverage you have guaranteed which is basically you take all comers if they sign the application you insure them and the only way that the insurance carrier protects their bottom line and risk for mortality is they exclude claims that occur in the first two years where if you die within the first two years it's a refund of premium plus interest. There are generally small face amounts of \$1,000 to \$50,000 generally there a lot of times used to cover funeral costs and you might see them sold on TV ads as you cannot be turned down and sold in mail flyers in direct to mail campaigns and I did some online shopping using my profile and generally it was about two times more expensive than simplified issue and that's because they don't underwrite they have to take all comers. On the simplified issue its generally accept and reject it's a little bit larger of \$5,000 to \$200,000 and a small number of health questions generally two to seven questions identifying and weeding out leading causes of death and they may perform a prescription drug check to try and sniff out any adverse selection or non disclosure and the product is priced with a five year mortality load because that very simplified underwriting cant weed out all the risk but it weeds out quite a bit

and generally they cost three times more than full underwriting best class and about two times more than full underwriting standard class.

These are a very important niche in the marketplace and the two product types serve the underinsured population where they just need coverage to cover the final expense so they are not a burden to the loved one when they pass. Finally there is traditional or full underwriting. With full underwriting it uses traditional underwriting data sources and it's a very lengthy process. Generally when you get over a face amount of \$500,000 or \$1 million it requires a paramedical exam and a lab result and they do a blood and urine analysis and when needed access to medical records and they go to your physician to obtain. They generally underwrite to multiple preferred and standard and maybe 10 substandard classes so it gives you a spectrum to ensure to maximize the best rate for their particular risk attributes. Generally full underwriting can take 30-60 days in the COVID world it's taken longer because it's taken longer to get medical records and exams primarily records because doctor offices have had all hands-on deck in their clinics to serve patients and they didn't have access to people to photocopy records. That brings us to accelerated underwriting and that started about 5/6 years ago where carriers were using alternative data sources and predictive models to identify low risk and clean cases and accelerate through the process so waiving paramedical exams and lab results and not requiring medical records and that reduces the process from weeks to days and it was a huge advantage throughout COVID because applicants were reluctant to have an examiner come to their home as they might have already been in other homes that day and they did want to take a chance or they couldn't get medical records. The accelerated programs with some of the data that I have seen saw a four times increase in volume from March through June and now they have really taken hold and virtually every carrier put resources into developing and improving accelerated underwriting programs.

The source for accelerated underwriting includes electronic sources that you can largely get in a short time as opposed to medical records which takes weeks and you can do a prescription drug check pretty quick in a minute or two and you can get electronic health records as a benefit from the Affordable Care Act as they digitized medical records and they are available quickly and their accurate and its been a huge time saver to have applicants to get coverage quickly. There are medical claims data sources and clinical lab tests that we can access quickly.

Some of the industry trends as I see them going forward are that the pandemic has accelerated the change in the industry as I mentioned life insurance has historically been a slow moving industry because you have to be cautious but the pandemic accelerated that change as you had the producers willing to make the change and forced home offices to drive change and force new ways of doing business so it was truly a benefit to the industry. Accelerated programs enabled companies to issue policies when they otherwise couldn't have because customers were leery of medical exams and companies have invested heavily and will continue to do so in accelerated programs as we are seeing changes announced almost monthly now. And we have seen a dramatic increase in customer experience as I mentioned cases are getting placed faster and they can get coverage faster and carriers now with the pandemic they are being really challenged by the low interest rate environment as a lot of investment portfolios are invested in long horizon asset so every carrier is looking for ways to cut costs so they can maintain the credit and interest rates and keep their policies attractive to consumers so accelerated programs are enabling them to underwrite through low cost channels so its been a big win for carriers. I expect additional evolution in this area with the digital move like this moving away from paper moving toward digital fulfillment and digital policies and digital signatures and it may require some regulatory changes in some areas as some regs are 30 years old and predicated on a paper policy and wet signature so we need to look at that. Finally, historically life

insurance underwriting has been focused on the effect on your organs from your lifestyle looking at evidence of end organ damage from the decisions you made over the prior 20 years but what we're realizing is that these lifestyle choices which take years to affect us can be identified fairly early particularly with wearables and cell phones and wellness apps that we use we track diet, exercise, sleep and stress I think we'll see a trend where carriers offer the applicant the option of sharing that info for potentially higher price discount upfront. That gets me excited because I think it will make insurance more affordable to people who take care of themselves and concerned about a healthy lifestyle.

Rick Swedloff, Vice Dean and Professor of Law, Co-Director, Rutgers Center for Risk and Responsibility – Rutgers Law School, stated that I want to start by saying that I very much admire the work that everyone is doing at the committee level as it's certainly the case that by defining proxy discrimination it will be highly significant because I understand that legislatures are starting to use that term without defining it so that is useful and I think that to the extent that you are trying to identify processes that will certainly help at least in the short term and prevent the kinds of invidious discrimination that insurance regulators have long sought to eliminate. Let me give my two basic concerns – first is that the definition says that proxy discrimination is the “intentional substitution of a neutral factor for a factor based on race, color, creed, national origin, or sexual orientation for the purpose of discriminating against a consumer to prevent that consumer from obtaining insurance or obtaining a preferred or more advantageous rate due to that consumer's race, color, creed, national origin, or sexual orientation.” That is, it's not permissible by the definition to intentionally substitute the neutral factor for one of the prohibited factors I think it's a laudable goal and it may make sense to stamp out that kind of invidious discrimination intentionally discriminating but I have some fear that the definition is too focused in intent as others have said and I have another fear that the definition is wed to a traditional method of underwriting that may be heading to the sunset although others are more qualified as to how long that time horizon may be.

I'll start with a hypothetical or story and we'll talk about what traditional underwriters have historically done. When traditional underwriters are thinking about how to determine what price to give a particular category or group they have to select a factor or group of factors that will correlate with loss. For example an insurer might ask does the age of a house correlate at all with the likelihood that the house will burn down or that the house will suffer greater loss if there is a fire. The insurer can then run some fairly standard regressions that is some statistical techniques and can determine whether it's true that the age of housing is related to loss or to higher loss in the case of a fire. If it's true then those with older houses may be asked to pay more for insurance than those who are similarly situated but live in newer homes. Imagine that insurers don't have access to info about the age of houses or for some reason the state legislatures have prohibited them from using age of housing in their pricing. In that case insurers might look for obvious proxies of the age of a house such as zip code or census tract data which one might imagine would correlate to the age of a home. This hypothetical raises the first concern I have with the new definition – the same data that might be useful for identifying the age of a house could also be highly correlated with a prohibited category. It's not hard to imagine, as Ms. Angwin suggested earlier, that zip code data which can be used to identify the age of a home could also be used to figuring out the racial characteristics of some areas. So if companies are facially using zip code data as a proxy for the age of housing's stock can they avoid rate regulation under this definition because they are not using zip code to intentionally substitute for race. This is the difference between prohibiting intentional discrimination and disparate impact. The statute seems solely focused on the former although it's using some confusing language I think and I appreciate what others have done to try and make the difference clear.

I would elaborate on this point as others have made some discussion on what is and isn't the value of disparate impact at this moment and I assume that this concern has been more vetted in earlier meetings but it's something for the committee to keep an eye on because it may be that simply identifying obvious proxies that have been discussed today by Prof. Kochenburger and Ms. Angwin is less useful because the definition specifically says that companies cannot use those obvious proxies as a substitute for a prohibited category but implies that they could use those obvious proxies for other purposes so that's my first set of concerns. My larger concern deals with how the definition will work in the long run. Insurers are increasingly incorporating AI and machine learning into their underwriting processes. AI in short and again I hope I'm not repeating things that everyone knows but AI in short don't be afraid it's not like the movies and a machine out to kill us it's just a set of techniques employed by computer scientists to help computers solve problems. The most commonly used technique in AI is machine learning which is quite simply an automation of sophisticated statistical techniques. Other AI techniques are less based on traditional statistics and instead based on complicated matching or pattern recognition. Regardless of the particular technique that is used the computers use algorithms to get through data in an iterative and unsupervised fashion. What that means is what they are trying to do is sort through the data to try and find a particular output. To put it in the context of risk classification we've been talking about, an algorithm could search through training data such as all the lessons of particular homeowners insurers to find which bundle of characteristics best correlate with loss. That process is unsupervised and unstructured and what that means is that in contrast to traditional statistical techniques where humans have to have some intuition about a set of characteristics that might correlate with loss the algorithm has no such prior judgments and is simply trying to find the best set of characteristics that match with that loss it is sifting through the data time over time until it can best match a particular set of characteristics to loss.

That set of characteristics can be radically larger than any traditional underwriting set of statistics. Traditional regression analyses are limited to 10-20 characteristics and AI is not so limited it can have hundreds. To be sure, machine data scientists can insist that algorithms don't use a particular characteristic such as race, creed, national origin if that's what the legislature says they can't use. And of course the data scientists could also prohibit the algorithm from using obvious proxies for those characteristics so if you all say you shouldn't use zip code or credit score or criminal history, all totally viable things that the data scientists could go in and program in and it would not use those. But because AI can use many more factors in its underwriting than traditional statistical underwriting there are new risks that aren't being addressed by the current statute. Specifically, I want to talk about that AI could come up with a bundle of characteristics that are not an obvious proxy but taken together perfectly correlate with a prohibited characteristic. So it's not the kind of obvious proxy discrimination that you are all worried about regarding intent but rather will nonetheless burden the groups that the state statutes have sought to protect from higher prices.

What to do about that problem is really complicated and as Mr. Karol added it is difficult in part because whether we care about those things in part might depend on the line of insurance and the rationale for the burden on those groups so for instance no one is probably particularly concerned that the elderly are going to pay more for life insurance even if we wanted to protect elderly from paying more in homeowners - those are questions that are deep and difficult to answer. But it is the case that I think we are going to have to move away from focusing on intentional discrimination and move more towards thinking about disparate impact. To do that we need to do several things and the first is collect more data. Ms. Angwin mentioned along with Ms. Bender that we need to have more data that's more available to more people so that

independent third parties can be doing analysis of what the kinds of burdens that are befalling certain groups. Insurers can't be prohibited from collecting this information so some of the restraints on insurers that prevent them from asking questions above race, creed and national origin might need to be loosened so that we get more of that data but in exchange what we need is more sunlight about what kinds of losses different folks are suffering.

Once we have the info we can then have these deep conversations about when we care that people of color might be paying more and I take the Ill comment at face value that he doesn't believe that they are but let's assume that they might be paying more for different lines of insurance – why? Do we care and is it problematic or not. We could certainly tune algorithms once we have this data to prevent some of this or we could structure regs in a different way so that we limit the spread of different rates. Lastly, I'd like to clarify one thing Mr. Karol said – its course true that disparate impact under the Supreme Court analysis has been limited in a number of ways so that there are lots of defenses for disparate impact and its very difficult for plaintiffs to prove disparate impact but I'm not convinced that states couldn't do more under their own statutes and constitutions to prevent disparate impact for insurance if they so chose so this is a situation where federalism has to come to the fore – how that interacts with Supreme Court doctrine on disparate impact is a very complicated question and is one that has not really been answered. I think that as this committee looks toward future it should look beyond intentional discrimination to look at disparate impact of different rates on different communities.

Asm. Cahill noted to Mr. Lynch that while he demonstrated that as a scientific aspect of actuarial science that there were correlations that could be explained how do you explain something that reflects about a 10% difference in the distinction of the individual versus 100% interest in the premium – if it were 10% versus 20% or 15% versus 18% that might be a different story but what the individual was able to demonstrate was that the study revealed vast differences in premiums. Mr. Lynch stated that the ProPublica study's findings were incorrect. Asm. Cahill stated that he understands that is his impression but the analysis from the study demonstrated a disparity between characteristics and premium of almost 100% so even if there are aspects of it that do not meet the highest actuarial standards how do you explain that vast difference or do you assert that it doesn't exist. Mr. Lynch stated that the premiums are being charged as asserted in my discussion they are rates that insurance companies spend literally thousands and millions of dollars coming up with and making sure they obey the laws in every state and making sure the rating factors have a statistical basis so there are cases where one person pays a low rate and another individual pays a high rate and without a thorough examination of the individual circumstances of each person and where they live does make a difference because the number of cars per square mile is perhaps the greatest predictor of the probability of being in an accident that exists but there are others that also do a very good job of predicting and when you put them together you can have people who pay vastly different amounts in insurance but those rates are justified and you know that they are because companies through things like adverse selection have a stake in charging the right rate form a marketplace point of view and for a legal and regulatory point of view have to. The individual cases there you would have to look deeply into what the circumstances were and what the rating factors were for them.

Asm. Cahill stated that I understand that in an industry based upon averages its difficult looking at individual cases but Mr. Chairman I want to point out that this really does point to the need to go beyond the current model that's being considered – systemic discrimination means that if everything works discrimination occurs and inappropriate unlawful discrimination is something that clearly I think needs to be further examined and if we limit it to the text of the model we will never get there. Asm. Cahill asked Mr. Karol regarding the application of Communities - this was a gov't agency that was I'll speculate being sued by a private group? Mr. Karol stated it

was a FHA case that considered how tax credits for developers who built low income housing units were administered by designated agencies. Asm. Cahill asserted that it should not in any way be construed as something that would limit a state legislatures ability to define what's illegal or inappropriate discrimination and asked if Mr. Karol agreed. Mr. Karol stated that I said from the beginning that it's not an insurance case but it cites other cases that are not directly applicable to the facts and circumstance of that case and basically provides a rule of law that would be looked at by many courts dealing with this complex legal question.

Asm. Cahill noted that Ms. Bender that she stated she had concerns with statements about the flood of data available and someone pointed out the potential inability for a legislative body or gov't body to stay ahead of that data – is that a concern and if so how would you propose that it be viewed or considered? What tools could we use to overcome that massive amount of data that may be beyond our ability to inspect? Ms. Bender stated that we are posed with this challenge as well to understand first all of what data is out there and available and what data we haven't even yet to being collecting as an industry and that is a big challenge which insurers have noted as well that as Mr. Lynch mentioned we don't use race in our rating plans right now which means being able to collect that info to understand what is the true disparate impact or discrimination happening is the first step as we don't have that info to test the theories and its problematic to use other proxies like zip code or credit score to try and predict racial impacts within our data and models as well. There is a big gap there we are trying to understand how to fill. Asm. Cahill asked Ms. Bender if she would agree with Prof. Swedloff that perhaps we have to revisit our restrictions or maybe even industry practices on data collection in view of the fact that such a significant amount of new data would be available and that it would become more difficult to ascertain what is actually a proxy perhaps more data should be collected, that's part one of the question and the other part is just an assertion that if data is collected I'll suggest that it may be reasonable to have a blind repository for that data that does not abridge proprietary info or put at risk competitive info where it could be examined for future policy. Ms. Bender stated that I won't say what I think the public policymakers should do but I would say actuaries always welcome the ability to look at more data.

Asm. Cahill stated he was intrigued with Prof. Swedloff's presentation because it really enunciated many of the points that he was concerned with since the beginning but I'd like to focus on the collection of more data and how we do so in a responsible way that doesn't infringe upon ability of companies to continue to compete in an increasingly competitive environment. Prof. Swedloff stated that to be fair I don't have an answer to that question – I'm sure there are ways to provide loss data that then gets aggregated together by commissioners and then is aggregated across multiple insurers so third parties can use in a blind repository more than that I don't have any novel suggestions. Asm. Cahill stated regarding the avalanche of data that is now available someone had talked about the voluntary submission about the way you drive – that's the microanalysis of data that we've addressed in other meetings. If we cannot stay ahead of the factors leading into a determination that might be perceived as a proxy for illegal discrimination might it be appropriate for us to start to simply blanket or prohibit a discriminatory impact and require our insurers to look at that end of the equation instead. I'm asking not as a suggestion for a model law just for your thoughts.

Prof. Swedloff stated that there a lot of issues that you raised for instance if people have telematics devices in their car there are all sorts of questions about who owns that data and privacy issues but that's not what we're here for but what I was asked to talk about today and I'm happy come back and talk about other issue is the risk classification questions. I've written and I think that states individually or collectively are going to have to amp up their ability to understand what's going on with new models with AI models. It's very difficult to peek under the

hood of some of the models – it's possible with machine learning models to understand what are the top 5-7 factors that are really driving the price. It's not always possible to understand what's driving the price when there are hundreds of factors. If that's true then the kinds of rate that have gone on in the past might undermine in ways that would require us to think a little more carefully of using disparate impact as a regulatory tool and to do that would require some very hard thinking about what do we care about and when and that's the work the legislatures will have to engage with.

Asm. Cahill stated regarding the process today we had a member of one panel make a presentation and then we had a person on another panel refute it – in the future I think it would be beneficial for them to be on the same panel so there could be rebuttals. Thank you Mr. Chairman for all of your work and thank you to all speakers for their insights and expertise that we simply cannot possess as legislators.

Sen. Breslin stated that I think all of us have learned something today and we have to now apply it and it's a difficult process and during the past several months we've had a lot of people thinking we were moving in the wrong direction one way or another and I can assure that's not our intention its rather to collect as much information as we can and make recommendations that will positively affect the people who are buying policies. I think we've done a great job to collect a lot of information that will be useful to the committee to come up with some recommendations and we'll hopefully end up with something we all respect. I'm afraid that might be Tantalus reaching for the grapes as its very difficult. I don't think our job is done but I think we've collected a lot of information that can be very useful. I commend the speakers for helping the legislators achieve some degree of knowledge to make the right decisions and that will be done at the same time that there is so much more information available each day that might have the ability to change our minds and rotate our point of view on an ongoing basis.

Sen. Bob Hackett (OH) stated that some of the frustrations we have as legislators as Prof. Kochenburger talked about the unfairness of looking at criminal records and if you look in republican states we have pressed hard to try and get records erased because we want people to get back to work and even some of the strongest republicans have changed their position because they realize that's important. I believe strongly that insurers use factors very strongly and regarding getting rid of criminal record in underwriting my question is if we are moving toward getting the less serious records moved out or erased and what's left are more serious don't the loss ratios from that underwriting of criminal records pretty much speak for itself that the loss ratio is there and its important to keep that factor in underwriting? But we have moved for example in OH we do things now that we would never have when I first started such as sealing records for people even with first degree felonies because we want to get people back to work and we realize they won't get hired if they have a certain type of criminal record.

What are the insurance companies finding out because it's in the news media all the time but if you talk to judges and law enforcement I still think it's an incredible underwriting principle and we are moving away from the records in trying to people back to work. Mr. Lynch stated that I haven't seen a lot of research about the particular variable that Prof. Kochenburger was talking about and I don't have all the info to what degree it used but as a general question I think tis an interesting and important one to ask – as the analysis of MO and what we saw in IL and TX and CA regulators looked that says that the rates that are being charged are appropriate given the risk profiles of the individuals being charged those rates if you alter that mix depending on which variables you prohibit it could well have an impact and I think that is on rating and that's one of the things that does need to be studied and I think if you think a bit about what makes some of the research Ms. Bender was discussing actually starts to look at that- what is the impact of a

variable that's been excised. I've been in the insurance game long enough to know that there has been efforts 30 years ago to place restrictions on the use of territory rating variables and that didn't work out particularly well for the insurance industry or their customers as you had severe availability and affordability problems and I happen to live in NJ which was virtually ground zero for that problem so that can be the extreme impact and it needs to be taken into account when you contemplate these things and is why you need research and we would recommend it be done by organizations that have longstanding ties in the industry like CAS and others.

Prof. Kochenburger stated that I sort of agree with both sides – the efforts to decriminalize both in the sense of erasing criminal records when appropriate as well as making less minor offense criminal those are very important and of course go well beyond the value to insurance underwriting and I also agree that understanding more the effect of criminal records on underwriting and how predictive they are is also pretty important but it gets back to the earlier discussion from Canada in which the Supreme Court said there doesn't seem to be other practical substitutes for the use of gender there – well now we're years later in terms of progress and we're using dozens or hundreds of risk factors and the fact that we might lose one in which we assume is predictive – 1 out of 200 what does that mean? It certainly doesn't mean insurer solvency and it may not even effect the risk pool and we make those decisions all the time. Pre-existing conditions are of course highly predictive of cost but we don't allow them for higher principles and say race is predictable for some aspect of insurance we don't allow that either so there are two points – one is that given the nature of the criminal justice system both in the number of people penalized and how and the fact that there are some many other factors that are increasingly predictive it argues we should study it and even if its actuarially justified is it necessary to get accurate rates.

Sen. Breslin stated that it now appears that the panel discussions are over and asked if there is any further discussion to be had. Hearing none, Sen. Breslin adjourned the meeting.

ADJOURNMENT

Hearing no further business, the Committee adjourned at 5:30 p.m.