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WEBINAR

CREDIT SCORING:
IMPROVE OR ELIMINATE?

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P R O C E E D I N G S

MR. KLEIN: Good afternoon, I'm Aaron Klein, senior fellow in Economic Studies. And on behalf of the Center of Regulation and Markets it's my great privilege to welcome everybody this afternoon to a conversation on the future of credit scoring.

Credit scores are a really ubiquitous function in modern society. These three-digit numbers that kind of look an SAT score have huge ramifications on individuals' lives, deciding whether or not they will get access to credit, and if they do at what terms. These figures seem to pop out of thin air, following you wherever you go throughout your life, determining all sorts of important attributes about what type of access to the financial system and what type of opportunities you'll fundamentally have to participate in today's modern economy and society.

Much has been written and discussed and debated about the role of credit scores in our society and in our financial system, which is one that is regulated at varying degrees by the Federal Government, by other actors.

It gives me great pleasure to have a conversation to ask us all this afternoon to step back and say what's the purpose of this entire system, what is here for it, should we make the system better, or is it time to go to something totally different? You know, one aspect of credit scoring that I think folks don't think about as much is that under the law that governs credit reporting the bureaus, the three major credit bureaus for whom all your information is reported, are only able to keep information on you, delinquent negative information, for up to seven years for everything other than a bankruptcy. And when I was researching where this seven-year number came from, it came from a law passed in Congress in 1970. And it's hard to recreate exactly what was going on in 1970, having worked in Congress for many years. Sometimes you get a number like seven is a compromise between one group that wants five and one that wants ten. But I was struck by the fact that in the Bible there's a seven-year debt jubilee requirement in which negative debts are essentially expunged biblically after seven years. And I wonder whether or not it's that biblical principal that is really guiding what today is thought of as highly technical, deeply sophisticated, highly predictive computer models governed by a legal structure that at the end of the day may be judged more on belief and fact that necessarily hard science.

With that as kind of an overview, we're going to have a fantastic panel of experts ready to

debate and kick around different ideas about credit reporting and credit scoring. But to set the stage I can think of nobody better to engage in a more critical analysis of the system that we find ourselves in than Congresswoman Ayanna Pressley.

Congresswoman Pressley is an activist, a legislator, a survivor, and the first woman of color to be elected to Congress from the Commonwealth of Massachusetts. Throughout her career as a public servant, Congresswoman Pressley has fought to ensure that those closest to the pain are closest to the power, driving and informing policy making. Throughout her first term in Congress, Congresswoman Pressley has been a champion for justice, reproductive justice, justice for immigrants, consumer justice, justice for aging Americans, for workers, and for survivors of sexual assault, and justice for the formerly and currently incarcerated.

Currently, Congresswoman Pressley serves on two very powerful congressional committees, the Committee on Oversight and Government Reform and the Committee on Financial Services. Prior to being elected to Congress she served on the Boston City Council for 8 years and was the first woman of color elected to the council in its 100-year history.

Congresswoman Pressley, thank you very much for joining us and it is my pleasure and privilege to turn the floor over to you for some opening remarks for today's conversation.

CONGRESSWOMAN PRESSLEY: Thank you, Aaron.

It's wonderful to be with all of you today to discuss this important topic, which is certainly a top legislative priority for me.

In a just America everyone has the opportunity to purchase a home, to secure stable employment and business opportunity, and to access an affordable education. Unfortunately, in today's America that is far from a reality. Decades of what I would characterize as policy violence has led to economic inequality, black and brown families pushed into poverty and out of equal opportunity.

I represent the Massachusetts Seventh Congressional District, which is one of the most diverse, vibrant, dynamic, and unequal districts in the country. In my district, from Cambridge to Roxbury, household income drops nearly $50,000 and life expectancy is much as 30 years. That's just a three-mile radius from Cambridge to Roxbury. Nationwide black women are paid $.63 for every dollar paid to white men, the black homeownership rate is nearly half of that of white homeownership, and now at its lowest

level since the 1960s. Black borrowers are graduating with record levels of student debt and educational redlining has forced them to pay more for credit and to pay higher interest rates. The under regulated and unjust merciless reporting and scoring system both perpetuates and further ingrains economic injustice.

In this country your credit score is your reputation, determining where you can live, work, and how much you will have to pay for everything from a car to a college degree. Consumers deserve a system that ensures equity, transparency, and accountability and is leveraged only when necessary. Too often credit reporting agencies engage in misleading and unfair practices that keep consumers in the dark about errors on their reports and make it difficult to correct them when these errors come to light. What's worse, American families are finding themselves trapped in cycles of debt simply for trying to afford basic needs like healthcare and a higher education. This system perpetuates racism and economic injustice while its benefactors attempt to pass it off as an objective metric of financial trustworthiness.

This fallacy must be challenged and defeated. Credit reporting and credit scoring are supposedly entirely objective, yet for the past two decades study after study has found that black and brown communities have lower credit scores that white consumers. Let's be clear, this is not because communities of color are less responsible. Credit scores incorporate elements of past inequality which was caused by white supremacist policy making and a lack of political will to repair past harms of slavery, Jim Crow, redlining, and ongoing employment, education, housing segregation and discrimination.

As you discuss the credit system today I encourage you to center the harms this system causes lack families and how giving more power and legitimacy to the big under regulated credit agencies might continue to harm historically marginalized populations. In congress, I put forward advanced legislation to address some of the biggest problems. And I'm grateful for the opportunity to share more about these proposals with you today.

The Comprehensive Credit Act, which passed the House last Congress, strengthens consumer rights by banning reporting of debts from medically necessary procedures, banning the use of credit scores for employment purposes, ensuring greater data accuracy, and strengthening consumers' ability to appeal incorrect information. This package also includes my Student Borrower Credit Improvement Act, which will provide much needed assistance to struggling private student loan borrowers

by establishing processes that mirror the protections granted to delinquent or defaulted federal student loan borrowers. It provides flexibility for borrowers who may be experiencing significant financial stress, service members who've been deployed, and those who live in area impacted by a natural disaster and may not be able to work.

The credit system can also be a source of trauma -- trauma, anxiety, and fear for me and so many others this issue is a personal one. My mother, may she rest in peace and power, took pride in paying her bills on time, but after several life disrupting events there came a point where she no longer could afford it. No matter how hard she worked, we owed everybody, the utility company, the landlord, the bank, the car company, and were frequently harassed by debt collectors. Our story is the story of millions of families who go through life with feelings of fear, vulnerability, judgment, and most of all shame thanks to abusive debt collectors.

My bill, the Ending Debt Collection Harassment Act, works to actively curb the aggressive tactics and psychological harassment the debt collectors are all too quick to employ. These legislative proposals are some, but not all, of the steps Congress must take to protect consumers. The Covid-19 pandemic has thrust families into debt and housing instability to no fault of their own. This will have harmful consequences for people's credit scores and their ability to accomplish their goals, specifically for black and brown families, renters, and business owners who have been the hardest hit financially. Now, more than ever we must restrict eviction data on credit reports to ensure families can remain safely housed. My HELP Act would do just that.

In closing, as policy makers and experts look for opportunities to improve the credit scoring system with alternative data. We must proceed with caution. The devil is in the details, and we must look for ways to give power back to consumers and eliminate practices that perpetuate the racial wealth gap.

Thank you again for having me today. And I know that this will be a compelling and engaging conversation with this august panel.

Thank you again.

MR. KLEIN: Thank you very much, Congresswoman. Join me in virtually signaling our applause and thanks for sharing your most precious commodity with us today, your time. And we benefit

very much from your wisdom. And you've set a fantastic stage.

With this I'm going to call forward our panelists for a virtual conversation, starting with Dr. Frederick Wherry. Dr. Wherry is a Townsend Martin, Class of 1917 Professor of Sociology at Princeton University and director of the Dignity in Debt Network. He helps advise the Boston Fed and previously served on the faculty at Yale, Columbia, and the University of Michigan.

Nicholas Schmidt is the CEO of SolasAI and a partner at BLDS where he heads the AI and machine learning practice. He publishes frequently on subjects of credit report scoring and artificial intelligence and is often a witness and expert on litigation involving credit scoring, reporting, and fair lending.

Jason Gross is CEO and co-founder at Petal. Petal's mission is to make credit honest, simple, and accessible. In that role he served on the consumer financial protection bureau's advisory board and is actively engaged in considering the future of credit underwriting.

Leading us in this conversation is Emily Stewart, a senior reporter at Vox where she covers the intersection of business, politics, and the economy. A graduate from Columbia University and a Brooklyn resident, she writes provocative pieces on how people experience the forces of capitalism and money.

Emily, as our moderator, it's my great pleasure to pass this baton over to you and kick off this conversation and debate.

MS. STEWART: Well, thanks so much for doing this.

I will honestly hop in with my first question, which is for Fred. You know, one thing that you and I think have talked about quite a bit is that credit scores and reports are a very, very big deal in our lives. And I'm curious if you could talk a little bit about how we got here and if their importance is really outsized in kind of how we live in the world as consumers and as citizens.

MR. WHERRY: Thanks so much for that question. It's something that I think about quite a lot. And so I think there are at least three stories about how we got here.

The first one I think is a story about getting information right in order to open up more opportunity for people who need it and deserve it. I think the second story is about getting information perhaps into the wrong hands, using it for entrapment and harm. But I think the third is a story about

putting information into a black box, making transparency and accountability nearly impossible.

And so the first story of course is the rosiest. And so when we think about the current estimate of about sort of 15 percent of U.S. adults who have a thin or non-existent credit file, you've got a large group there. And in that large group of nearly 45 million people there are a lot of people who are able to pay what they owe and are likely to pay what they owe but are not given a chance to do so or given those chances at too high a price. And so in that way we can think about the rosy story of let's give credit where it's long due.

The more perverse story, however, reminds me of a 1941 report published by the National Bureau of Economic Research in which David Durand noted that it was not just a matter of selecting well by getting information right, but it was also about how we enforce credit agreements with vigor. And so if creditors could be lenient in terms of letting in people who might be really high credit risk and knowing that they're really high credit risk, but if they had really great debt collection tactics, then this would be a way to sort of bring in people who really need the opportunity and the opportunity then can become a trap. Now, this isn't exactly how he would put it, but this is how I see it.

And I think the final story is that story — the untold story of fairness and accountability. And it goes something like, as the Congresswoman put it, when we have a market tool that is so consequential for where we live, where we work, whether we're even called back for a job, but it is black boxed and unaccountable, then it makes it very difficult for consumers. And there's a sense that a lot of what's happening is unfair, but also untouchable.

And so taken together, these stories suggest that credit scoring has gone too far because we as a society have failed to govern how it's used.

MS. STEWART: You know, the last thing we talked about — the things that you and I talked about quite a bit is that employers sometimes can look up this information. And I think for regular people, that's very scary. Especially for just someone looking for a different job.

But, Aaron, I did want to turn it to you. You've been pretty critical of the system as it is today. I don't want to be too crass, but I guess my question is are credit scores a scam or are — or just what do you see as the problem with the current system?

MR. KLEIN: So there are a lot of problems with the current system. The errors on

Bureau reports, which data indicate there is a material error on potentially one in five Americans. Intuition, as well as some research, indicated that the more common your name the more likely you have an error. I can tell you a few stories about the Aaron Klein in New Jersey who's on my credit report.

What is really structurally flawed, and I see no way of solving this problem, is that individual accuracy is neither the goal of the Bureaus — in fact, it's the opposite, it's a cost center. The goal is to be accurate in the aggregate. If the errors are symmetrical, that is well, okay, you Aaron Klein got somebody who didn't pay a bill on their report, but some other Aaron Klein picked up your positive credit report, so in the end it evens out, right. As a general proposition, symmetrical errors, which most researchers expect, are fine because then in the aggregate the data is "accurate". In the individual you have no recourse on an error. I have complained. I have provided documentation, but the credit bureau is under no legal right to adjudicate the accuracy of the information it contains and you have no legal right to ensure that accuracy. And that creates what I think is fundamentally an unjust outcome. Holding aside whether or not aggregate-wise these things are accurate, which I deeply, deeply question.

You know, one of the things I've said for movie aficionados of a certain age, we remember the movie Fight Club, best know with Brad Pitt and Ed Norton. And in the end — I'm not going to give out the big surprise of the movie, although if you haven't seen it you're probably in the minority — but in the end there's an explosion of a bunch of buildings from a plan. What most people fail to appreciate is what they were blowing up in Fight Club were the credit bureaus. The idea behind that movie was then it would give everybody a fair start, you would eliminate the information. Now, that feels very '90s, the idea that information can be eliminated, right. This now perpetuates on the cloud and in the multiverse and all of this will follow us to some degree forever.

think the more interesting question is rather than destroying the current system, can we create an alternative that is better. And there's been a shocking amount of research that shows a series of factors that can more accurately predict whether or not you will be repaid, which is the ultimate purpose of credit scoring, than these three-digit numbers that are made to look like your SAT score. I might note that SAT scores are extremely predictive of whether or not you get into college because they're used for whether or not you get into college, right. Controlling for other factors, SAT scores are basically non predictive about how well you'll do in college.

It's an interesting analogy in thought as it relates to credit. If you give a group of people credit at 10 percent, you give another group of people credit at 30 percent, and you kick out a third group of people who they have to seek credit effectively at 200 percent, I'm pretty certain that the 200 percent people are going to end up in a lot more financial distress and default and then the 30 percent and then the 10 percent. And then you look back on it and you go, look, we predicted, if you got a higher SAT score you're more likely to get into a better school. Yeah, that's right. Because you're using it.

So that's why I think that — just to close with my thought, Emily, I'll be like, oh, look, let's just improve the system, let's just include more alternative data. And the Congresswoman pointed that out. I'm a little more skeptical. I'm not sure that improving alternative data, improving the system is going to get where we want to get. I think we need to leave it wholesale and go to a brand-new alternative and different world.

MS. STEWART: Well, Nick, I guess I just want to turn this a little bit to you because as I understand it your role in this is to try and make the system a little better, right? And so what does that look like? Is it possible (inaudible)?

MR. SCHMIDT: You know, whenever I have these conversations there's always a part of me that hopes the Aaron Kleins that I'm talking to are wrong, because I do believe in incremental change. But if I'm wrong about that, then let's blow the thing up and start over.

But I do believe in incremental change. And I think that really in the world we're living in the alternative is to go back to subjective decisioning and that is not a viable solution. What you're going to end up with is systematic racism, redlining, a world where all the problems of the '50s are just perpetuated. And instead what I see is using the system as is and improving on it. I actually have a reasonable high view of FICO scores, Vantage scores. I think they're very complicated to understand, but for the people who can be scored by them they actually are using data that is pretty reasonable. You know, have you paid your bills in the past. Well, if you haven't, probably not too surprising that people aren't going to loan you money in the future.

Now, being able to change that, all that is very important. One of the things though that I think Aaron and Fred were keying in on is the idea of bringing in more people. And with FICO and Vantage and the credit bureaus, that's a very difficult thing to do because the credit or the data quality

that is required or the data elements that are required or sort of locking a lot of people out of the system, or they have been in the past. And so in order to have a FICO score that scores all these other people, you would have to degrade the quality of the models that are being used. And so to me the opportunity to make things better is to go to a second level of data, which would be alternative — some form of alternative data probably used — some kind of machine learning or AI techniques to do that and see if you can improve people that way.

I think one that's really important to note is to think about these things as second look models where if you can get approved via a FICO score I really think that you probably are a pretty good credit risk. But if you can't be approved because of FICO for whatever reason, then to move onto alternative data or alternative techniques is a pretty reasonable way to go. And what we found within my own firm is that even using traditional data or using alternative data, you really can say I want the machine, I want the algorithm to focus not just on credit quality, but also on fairness, however you might define that. And if you asked the machine or direct the machine to focus on that second dimension of equality, chances are because of the historical discrimination, you're not going to get to equality and maintain the predictiveness of the model, but you absolutely in almost every situation can do better. And so to me that's where we can move forward.

MS. STEWART: Before we go a little bit — but I did — you know, Jason, obviously you all kind of have a solution to this, right, cash flow underwriting? And I guess I'm just curious if you could talk about what it is and why you think that this is kind of a better way to go.

MR. GROSS: Sure. And let's start with the status quo. There's about 150 million Americans that have prime credit scores. It's a little bit less than half of the population. This fluctuates over time. Credit scores were — they reached an all-time high last year, which was a very strange impact of the pandemic. But you've got about half of the U.S. adult population with a prime credit score and that other half that does not have a prime score. And the experiences of these consumers, the opportunities available to them are vastly different in one group versus the other. With a prime credit score you have the ability to acquire assets, to purchase a car or a home, to get financing to start a small business. Your credit score is a boon that helps you in housing, employment, and so on. If you're in the other category, the other half of our population your credit score eventually holds you back from access to

opportunity. It's potentially missing entire — 50 million adults in the U.S. have no credit score at all. There's a massive gap in the system that we're discussing. Tens of millions of additional consumers have what we call thin credit files, meaning that they have some credit information but probably not enough to create an accurate picture of their likelihood to repay their financial obligations.

And when you dig into the demographics here, what you find is no surprise. Disproportionately, folks that have been historically underserved continue to fall through the gaps in the system. Blacks and Hispanics are two times more likely to lack credit scores, first and second-generation immigrants are disproportionately likely low- and moderate-income consumers. Young people across the board, because as everyone knows, you start with a credit score of zero until you work your way up unless you have support from a guarantor or a co-signor, usually a parent that themselves has access to the credit system and credit scores can be passed along in that manner which reinforces some of the historical inequality in the space.

So the status quo leaves a lot to be desired. This is the problem that we set out to solve at my company. And the most promising solution that we've found that's possible today comes in filling in these gaps that exist in trying to understand people's financial stories. There's no magic associated with the information on a credit report. These are not the fundamental elemental factors that make up credit risk or responsibility or likelihood to repay. The information that we use to make these decisions — and credit scores are used in 90+ percent of all of the credit decisions made in the United States — this information is a historical relic. It is the information that was available many decades ago when these systems were created.

But a lot has changed since then. Data and technology, going through a revolution over the intervening period of time such that today if we wanted to we could analyze a comprehensive holistic picture of a consumer's financial life, not just a credit report which might be missing or might be erroneous, but giving people the benefit of the money they make, the bills they pay every single month, irrespective of whether they're a renter or a homeowner or they're in government housing or what have you. The entire financial picture can be represented in these decisions. That's what we call cash flow underwriting. That's sort of an industry term. But really the idea is that consumers should be able to use the financial records that they have to demonstrate their credit worthiness wherever those records are.

So just because a bank hasn't given loans to you or your family or people in your community, that shouldn't stop you from being able to come forward with the record of the bills that you have paid to demonstrate your credit worthiness. And the thing that is both depressing, and also may cause for optimism, is that all of the technology that is required to create the kind of more inclusive, more accurate, more fair system that I'm describing is available to us today. What's depressing is how few institutions have chosen to use it thus far.

MS. STEWART: Nick, I am curious just like what you make of that sort of solution or these sorts of like alternative ideas?

MR. SCHMIDT: I think that Petal does is really probably one of the best examples of the right thing to do with alternative data and expanding access to credit. Because the data they're using — as far as I know, and, Jason, please correct me if I'm wrong — it's really pretty obviously related to repayment. And so there's going to be an ability for a consumer to say, okay, yeah, this is data that I want to give. It's indicative of my credit quality and I'm good with that. There is a degree to which I am worried that the algorithms that may be used to determine credit worthiness from cash flow data may be really difficult for a consumer to understand. How long information is used, you know, and what in particular goes into it, how does the algorithm ultimately come up with a decision, what do I need to do to change my score. And if that is not clear to the user or the applicant, then I think cash flow data sort of puts you in the same — it's just one additional piece of data that may not make anything clearer to people. But for the unbanked or for the people who don't have credit scores, it's really a wonderful opportunity to start to build up that information that will eventually get them into the mainstream financial system.

MR. KLEIN: Let me just jump in here for sec because there's a huge asymmetry going on in this structure, right. I'm not so sure that like knowledge of what improves or hurts my score, right — would taking out another credit card help my FICO or lower my FICO, the answer is it depends, right. And it depends on stuff that fundamentally no one can really tell me without knowing a lot of information about me. What's concerning to me is not that, what's concerning to me is if I wanted to be a bank and just wanted to do cash flow underwriting and I just wanted to do Petal style loans, I can't. Why? Because my regulator won't let me. The entire banking regulatory system predicates these loans on FICO scores.

And if I just walk in and say here's my loan, I'm plus $200 a month cash flow, plus $500 a month cash flow, the regulators have no idea how to handle that. They'll just turn around and say what's your FICO, what's your average FICO? Is it 680, is it 720? The entire regulatory system is predicated on having scores for people. And as a result, they'll be subject to punitive regulatory system.

I kind of like Nick's point about the idea of second look and increasing and if you're not well served, right — because the arbitrage in Jason's business model is not 800 FICO score people with good cash flows, right? Those are not going to be Petal customers. Tell me if I'm wrong, but those folks are getting fought over by very big and powerful lenders, right. The niche that you're serving are people without scores or people with bad scores who actually have other data.

And in Washington, one of my favorite numbers is 17,626, which is the answer to the question of what's 26 cubed, or what are the maximum number of 3 letter acronyms, which is what we seem to devolve into. And dealing with credit rating agencies, often called CRAs, right, I also think of the other CRA, the consumer reporting agencies, the credit reporting agencies, or the credit rating agencies. We had a system going into the financial crisis that where if you were AAA it didn't matter if you were a stinking pile of garbage because you got all these regulatory treatments because you've been blessed as AAA. And then that system imploded with serious consequences. We're in a weird system where we have a credit reporting agency that dominates this space structurally and a set of bank regulators that are unable to move beyond their reliance on it, just like they were unable to move beyond their reliance on credit rating agencies in the financial crisis.

The consequence of this is very different. Rather than loading up on supposedly safe securities that imploded and required trillions of dollars of taxpayer bailouts, instead we have a system that just permanently segregates a group of people to a really bad set of financial choices and opportunities and outcomes. And if you think of the ladder of opportunity tilts it to an extremely steep level, and that's kind of a silent crisis. And from my experience in government, silent crises can go on a very long time, right. You couldn't ignore the 2008 crisis if you tried. But this crisis can perpetuate for generations. And I don't see a way out of it unless we just acknowledge that people ought to be able to take chances on companies like Jason's.

MR. SCHMIDT: I don't think your analogy is correct though because what happened with

the credit rating agencies was that they were really applying very high ratings to junk. And if we want to take the analogy, it would be FICO and Vantage start giving — they take a lot of people who have no credit score and are bad credit risks and suddenly make them be 800s. And there's no evidence that that is happening. In fact the criticism is that they're not scoring more people. And so I think the analogy just falls apart there and doesn't get to the real problem which is that there is this population that just doesn't have scores. And so whether or not there's an over reliance on FICO, that could be an argument. But it's not that we're in a situation where FICO is changing the credit quality or Vantage or whomever it might be. They're not suddenly bringing in more people and saying that they're credit worth.

MR. GROSS: I think that — if I could jump in — and I think there's a number of different threads that we can pull on here from Aaron and Nick's comments. I think that first it's important to ring-fence data that should be considered in a credit decision and data that should not be considered in a credit decision. Over the years this debate has raged I think far beyond actual market practice, but folks like to debate what type of hypothetical information may one day have bearing on a credit decision.

We take a fairly conservative view of this and maybe surprisingly given the fact that we're a technology company and a newer player in the space. We focused exclusively on financial data that's already taken into account to make consequential credit on lending decisions every single day. And I think that's a really important point to make here. When people apply for mortgages or small business loans, when they're applying to borrow large amounts of money, more than just the credit score is always taken into account. Borrowers or applicants for these types of loans provide bank statements that are typically reviewed by human beings, by loan officers, but it costs something like $8,000 to underwrite a single mortgage in the United States. That more intensive, more comprehensive process isn't used for small dollar lending, credit cards, because of the inefficiency associated with doing the analysis. But those small dollar products are the gateway to the larger financial system. That's the front line of credit access.

And so while there can be a lot of focus on what new data we're going to use in these decisions, we actually consider ourselves at Petal to be using traditional data. We don't consider this to be alternative data at all. The innovation is in automating the analysis so that it doesn't cost $8,000 and take three weeks to decide whether or not someone qualifies.

That kind of leads me to a couple of things that Aaron made me think of. One point that I think is worth making is that we're not just filling in gaps in the system where a FICO score doesn't exist. We also have the potential to increase the accuracy of scoring across the board. And this is really important. And it's not just an issue that banks need to care about. So why is accuracy important? Accuracy is important because of all the people, of all the 150 million Americans that don't have prime credit scores, a very, very small fraction of them actually ever default on a loan or a financial obligation. It is the uncertainty about the risk of defaulting on a loan that ends up being applied as a tax across all of these populations. The more accurately we can assess who can actually afford the financial obligation versus not, the more people we can approve for credit and the lower we can charge people in terms of the cost of that credit. There's no question that when we go beyond just FICO scores all of the stakeholders have to come along, the consumers, the lenders, the secondary markets, the regulators. But there's nothing that prevents us from creating a system that has transparency, understanding, consistency.

And the last point that I'll make is that data sovereignty, the ownership and control of credit data, is shifting right underneath our feet. I think this is one of the most consequential changes that is playing out in the market today. Credit bureaus are centralized third-party warehouses of information. They collect information about you whether you like it or not. And their business model involves selling that information to lenders and other folks that want to use it to market products to you. This is very different from a modern understanding of data ownership and data sovereignty.

Today, and increasingly through regulation and legislation all over the world, we're taking the position that the data that describes you is your property, and you should be able to exert some control over that data, who has access to it and who does not. And what's really interesting about cash flow data and the types of information that I'm describing and that we use at Petal, is that that data is owned and controlled by the consumer not by some centralized third-party bureau that could sell it to a third-party, could lose it in a hack or data security incident.

So I think, you know, if we want to go with Aaron's approach of starting from scratch — and I'm not sure which camp I'm in — maybe I'll decide by the end of the conversation — but if we want to take that approach we need to vest the ownership of the information in the consumer and give the

consumer the full ability to share or not share access to the information with whoever they choose.

MR. WHERRY: Can I just add that one of the things that's happening with this conversation about the consumer is that we've returned back to the bottom. And so I operate in the bottom. I sort of run around talking to consumers who do have financial struggles and what they'll say is that when you're talking about cash flow data, for them that makes sense and it's fair. When you're talking about something that's black boxed, that's where they feel as if they have no agency at all and that they're just kind of being beaten down.

And so one of the things I think we should ask is not only what is sort of technically possible, but what is it that consumers, especially those who are sort of most affected by what happens with credit scoring, sort of at the bottom of the economy, what do they see as being just and fair, what should be out of bounds for sort of alternative data. And that's something that we're starting to ask, but I think it's something that should figure more centrally in our conversation.

MS. STEWART: I mean to kind of follow up on that, frankly, I am curious when you talk to people and when you think about this, an alternative data, what feels fair to you, what keeps you up at night that is scary and should be off limits?

MR. WHERRY: I mean so some of the things that I think keep me up at night are discussion about looking at people's social media posts or who they're connected to on Facebook or whether or not they're shopping in places where other people with sort of low scores shop. So those are the things that keep me kind of up at night.

And I think the other thing that keeps me up at night is lifting up the tool of the credit score so that it is unassailable. And so there's a sense that so long as it's working, even if people don't think it's just or fair, we should just use it when we have other ways of thinking about credit worthiness that — such as how much do I have left at the end of the month to put onto a bill. Most people think that's fair.

So those are things that keep me up at night.

MR. KLEIN: So if I could jump in because this question of fairness is really important. There was a great paper by a woman, Manju Puri from Duke, who looked at a group of actual loans made by Wayfair in Germany. And using this German — and compared their actual performance with German

FICO and she built an AI and that AI was able to slightly outperform German FICO using five variables — time of day of the purchase, mac or PC, phone, desktop, laptop, is your name in your email, and domain, right, gmails are better credit risks than hotmails, right. I won't even get into the German version of AOL.

But the question there is probably all five of those elements — which by the way are available instantly to the online lender, 100 percent accuracy, right, and no cost as opposed to going and pulling your credit report — each of those five would probably be considered illegal or unfair under U.S. law, which precludes for the provision of credit, which is treated very, very specially, right. Home Depot got caught offering different prices to mac versus PC customers who came to their website, right, because mac users tend to be wealthier and whiter. And that was legal. Bad press, but legal. But in credit we have a different rule and we have a set of protected classes. Interestingly, that set of protected classes is not uniform across all financial services. To give one example, gender, right. Women tend to be, all else equal, better credit risks. They don't default as much. Eighty percent of people have not defaulted on a loan according to some research that is out there. Now, a minority of people are prime credits. But women general cross subsidize men who tend to be more likely to default. We do not allow this legally, right.

Car insurance, totally different story. You have a teenager girl, you have a teenage boy, you know nothing about their driving history, only their gender, radically different price structures based solely on gender, which is totally — right. So even within our society, within the same protected class constructs, we allow for discrimination in some financial products, like insurance, and we preclude it in others.

So part of the problem here is that credit has been held a very different standard, and I think that's arguably a good thing, with this caveat, which is that things were grandfathered in. I agree with Nick's point that the prior system FICO and credit scoring, automated credit scoring, represented a huge upgrade to the prior view, which was you came into your bank and he kind of looked you over and decided whether he liked your parents or not and gave you a loan. And I'm using the "he" pronoun consciously because that banker in the 1960s was pretty cleared gendered.

So that was a huge upgrade. The question now is can we do even better. Technology has advanced even further. And what I think we have is a legal playing system that is given ensconced

incumbency power for a variety of reasons, in part because it's holding new technology to a very different standard of fairness that I don't even think the existing credit scoring system would pass, other than it's been grandfathered.

And so I'm worried. Cash flow underwriting is very appealing because it's kind of intuitively fair, as Dr. Wherry points out. And I think it would pass the test that we've set forward in law. A lot of other things wouldn't. Whether or not they should or shouldn't. be used, I think reasonable people can debate that.

MR. GROSS: Aaron, one point that I would make here quickly as a practitioner, making loans each and every day, evaluating different sorts of data that could factor into the decision, non-financial information of the sort that you're describing of and of the sort that keeps many of us up at night. You know, the use of how many friends you have on Facebook to determine whether you qualify for a loan, how charged your cell phone battery is. We've all heard of these different factors, right. These things are so attenuated from the actual financial substance of what's going on, that not only are they potentially discriminatory or unfair, but they also just aren't very predictive of what happens with the loan. I think that the dialogue in this space can very easily slip into the analysis of all of these different kind of exotic factors that we might use, but the key I believe is to bring this back to the core financial information, which is far more relevant to whether or not someone will actually be able to repay the financial obligation or the bill that we have in mind.

So I think the way that we can keep lenders within bounds here is by making available more of the underlying financial data that consumers understand and that ends up being far more useful to a lender anyway. I wouldn't be speaking publicly, it wouldn't be a public appearance of mind if I didn't put in a plug for Dodd-Frank 1033, which is the section of Dodd-Frank that gives consumers a right to their own financial data. The reality is that most consumers today are not able to access in a seamless unfettered way all of their digital financial information. If they were and if they were able to share that with a lender at the time that they were applying for a loan to demonstrate their credit worthiness, you would have far fewer lender seeking to experiment with social media profiles and web search history and all of these other things that end up being really attenuated to what we're trying to decide.

MS. STEWART: You have about, what, nine minutes left, so I do have a couple of

audience questions. We'll toss a few to whoever would like to answer, but this one feels slightly related. In 2006 Brookings hosted an event about additional data, telecom and utility payments, and no legislation passed, mandate, or provide affirmative permission.

I'm curious if any of you have thoughts on if Congress had passed such a bill, would it have made a difference for racial equity or wealth building if that were allowed?

Any takers?

MR. KLEIN: Look, I wasn't at Brookings in '06, but I would posit a quick answer, which is it would have made a marginal difference. Look, I think about 50 percent of white Americans have what are considered very good 700+ FICOs and about 20 percent of African Americans. Part of this has to get to Jason's point, which is about using relevant data. And I think credit reports are rife with irrelevant data. My credit was held down for quite some time because a landlord said I damaged a rug of theirs, which I didn't. Again, no ability to get that correctly put out.

So I think the answer to that question would be, had that happened, it would have a small and marginal difference, but in addition, lenders have to then use that alternative information. And so a lot has been written about FICO 9 or Vantage or these new pieces of information. But you have to go all the way back to are the big lenders using that, are the bank regulators using that, right. Because if people have differing credit scores, it's one thing if the lender uses it, how does the regulator use it, how does it move forward.

So I think there would have been a very small marginal improvement.

MR. WHERRY: But beyond the marginal improvement, there is a question about whether or not consumers would feel that some of their activities that they see as indications that when they've got a bill they pay it is somehow being acknowledged in some way.

And so I think one of the things we also have to keep in mind is that consumers want to be able to say my activities are seen and they are acknowledged. And it that way it feels as if even it's only a sort of a marginal benefit to that group, it feels a little better, it feels as if you're in market that is not just about sort of the big players, that there's some room for the smaller folk.

MR. SCHMIDT: I think that I'm absolutely — I wish that that had passed and that data were part of people's standard reports or available. The thing I worry about with all of these data sources

though is the availability and whether or not people of color and other disadvantaged people actually have accurate data being put into the system. If you think about rental payments, for example, probably the only people who are going to put rental payments into a data base are larger companies that I would imagine are probably renting to predominantly white or kind of brown and white groups, whereas if you think about what's the most racist place, it's probably housing. And so if you're relying on your landlords to put in rental information into your credit report, are African Americans really going to be disadvantaged by that? And I think that's a real worry. So maybe we do make the pie bigger and that's a really good thing. But do we have safeguards in there to make sure that things aren't getting worse as a result of the data providers not really giving the information that the consumers need, and the banks want.

MS. STEWART: Well, I mean I guess since we have over four minutes, I'm curious of each of you could just say like what is your best idea to make this a system that more people can get into in a way that is still responsible?

And I guess I'll start with Fred.

MR. WHERRY: Well, so my best idea is that the people that we say that we're trying to bring in actually have much more of a say about the kinds of information that gets used about them. And that there is a little bit more of a recognition that you're walking a bit of a tightrope when you're bring more information and then trying to build in some safeguards so that that information is actually benefiting those groups.

And the other thing I'd say is it may be sort of time to both let 1,000 flowers bloom, but also think about have much more public accountability for the kinds of instruments that are out there that are so consequential for people's lives.

MR. SCHMIDT: Slightly to reiterate I think what Fred said, I think bring more data in, bring the ability to incorporate more information, potentially using AI machine learning, but have clear accountability and the ability for a consumer to appeal negative results. I think that that is absolutely key. As you bring in this newer information that's not as well understood, let people appeal it and have that process be transparent.

MS. STEWART: Jason?

MR. GROSS: I would say we need to recognize credit scores for what they are, which is

a metric that was designed many years ago based on one facet of some consumers' financial lives. It is a score based on your debt. If you haven't had debt, you're on the outside.

In the 21st century we need to go beyond that metric, which again was just the best we could do at the time that it was being developed, and we need to move towards a system that is comprehensive and holistic and accurate. And I couldn't agree more that it needs to be well understood by the consumer, the lender, the regulator, the secondary market, what is considered, what is not considered, how your score works, how to influence it, what steps you should take. But what we found in using cash flow, working with these customers for going on four years now, is that this is intuitive. What's not intuitive is a credit score.

We've all had to learn about utilization and different types of trade lines. There's a whole vocabulary that's required. But looking at the money you make, the bills you pay, the savings that you've been able to accumulate over time, everybody understands that because that's what determines whether you can afford to buy a new bicycle or whether you can afford a payment on a credit card or a loan or whatever it may be.

So we need to think more broadly about what constitutes someone's financial responsibility, financial ability to take on a new obligation. We need to give consumers the data, the ownership over their data so they can come forward and demonstrate their credit worthiness. And we need to think globally about solving these things because it's not just in the United States where you see these issues, you can make the exact same moves in terms of data sovereignty and technology to expand credit access all over the world.

MR. KLEIN: Credit scores are the out of tune oboe that the rest of the financial orchestra is in tune with. And as anybody who ever played in an orchestra knows, the reason that the orchestra tunes to the oboe is not because the oboe produces the truest best sound, it's because it's the hardest instrument to tune.

The reality is that we've synced up to a system that is deeply inaccurate and full of disparities and inequalities. In order to move beyond that system you can try to either fix the system by improving its accuracy and by allowing not only appeal but true adjudication of fact, which ultimately will severely hamper the incentives of the existing system.

One thing we didn't touch about, which is an idea that I'm not a huge fan of, is creating a government or public credit scoring system, because I find very limited evidence that a government can make up a three-digit number that looks like an SAT any more efficiently or effectively than a credit bureau can. In fact I think a lot of experience would tell me it would be the opposite.

But instead to allow a system whereby banks and other providers of credit can use real accurate financial information of the type that Jason and Fred and Nicholas have mentioned and make their own credit adjudication and allocation system without a regulatory or market structure that forces an adjudication back into a credit score. Try to buy a mortgage that goes through Fannie or Freddie or the Federal Housing Agency without a FICO score or using a piece of alternative information, right. Try to get a series of other loans like this. It is deeply challenging, it is difficult, and there are a series of regulatory impediments. Some regulators, like the comptroller of the currency with their Operation REACh are thinking more holistically. And I think we need to create a regulatory task force dedicated to moving our financial system out of the 20th century of these credit scores and into a new, better, more equitable, and more accurate financial system predicated on what people actually have in the bank account as opposed to what was reported on them theoretically by people who may or may not be accurate from five years ago.

MS. STEWART: I think our time is up. Thanks to all of you so much for doing this. Yeah, we're done.

MR. KLEIN: Thank you all very much. This was a pleasure. Thank you, Emily.

MR. SCHMIDT: Thanks.

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