FEDERAL TRADE COMMISSION

CONSUMER INFORMATION AND THE MORTGAGE MARKET

Thursday, May 29, 2008

8:30 a.m.

Federal Trade Commission

600 Pennsylvania Avenue, N.W.

Washington, D.C.

FEDERAL TRADE COMMISSION

I N D E X

P R O C E E D I N G S

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WELCOMING REMARKS

MR. BAYE: Good morning. I thank you all for being here bright and early this morning. I am Michael Baye, the Director of the Bureau of Economics here at the Federal Trade Commission. It is my pleasure to welcome you all to the Federal Trade Commission and to kick off what I think is going to be an absolutely fantastic day.

Today's economic workshop on information regulation, mortgage choice, and mortgage outcomes could not be more timely or important. As you all know, the news is full of reports about how turmoil in housing and mortgage markets affects the financial security and welfare of many hard- working American families. The effects can also be felt in our neighborhoods where vacancies due to foreclosure have increased and in the overall economy. Earlier this month, the Wall Street Journal reported that foreclosure filings were up 65 percent from a year earlier and that about 2 percent of households nationwide are in foreclosure.

Almost daily, there are increased calls for our government to help consumers and other stakeholders. Multiple pieces of proposed legislation have been introduced in Congress, state legislatures, in an attempt

to help ease the crisis.

Economically sound solutions to these problems require an understanding of why current consumer protection policies may have failed, as well as an assessment of the likely long-run effects of alternative proposed policies on consumer choice and competition in mortgage markets.

While there are many ramifications and angles from which to view mortgage markets, this economic conference focuses on how consumer information impacts the functioning of these markets. A variety of distinguished scholars will share their research on how consumer information and the regulation of such information affects consumer choices, mortgage outcomes, and consumer welfare. By bringing together distinguished panelists with expertise in real estate economics, mortgage markets, information regulation, as well as marketing and consumer behavior, and through what I hope will be a free and open discussion of the relevant economic issues, I know we will learn a great deal. It is my hope that the fruits of this workshop will be useful to policymakers in their quest to enhance the welfare of consumers.

The Federal Trade Commission's twin missions, consumer protection and competition (or antitrust),

uniquely position staff and the Agency's Bureau of Economics to contribute to today's discussion. It is well-documented in the economics literature that consumer access to accurate information is an essential underpinning of the virtues of competitive markets. For this reason, much of the FTC's work on the consumer protection side uses our expertise in the economics of information to ensure that information disclosed by businesses is accurate rather than unfair or deceptive, and that the information presented is understood by consumers. This ensures that the freedom of choice that buyers exercise in markets, the hallmark of a free society is based on the best available information.

On the competition side, our expertise in industrial organization permits us to identify anti-competitive business practices, as well as overly burdensome regulations, that distort firm’s incentives to engage in healthy price and quality competition. This expertise empowers the Commission to utilize a multi-faceted approach to protecting consumers, especially in the subprime area. We enforce consumer protection laws, provide consumer education, and help ensure that business practices or regulations do not adversely affect competition or consumer choice.

In addition, and very importantly, the

Commission conducts research to better understand consumer and market behavior in order to ensure that policies designed to protect consumers do exactly that and that such policies do not have adverse economic consequences.

The Commission also coordinates and shares its expertise in this area with federal banking agencies in connection with their interests in protecting consumers in the mortgage marketplace. In short, economics, as well as history, teaches that competitive markets are the best way to protect consumers and the FTC's twin missions in antitrust and consumer protection work hand-in-hand to facilitate well-functioning competitive markets.

In light of all of this, it is not surprising that mandatory information disclosures play a central role in the existing regulatory framework for protecting consumers in mortgage markets. However, the Commission's experience has demonstrated the current mortgage disclosures are often ineffective in providing consumers with the information needed for a well-functioning mortgage market. These conclusions are drawn not only from numerous law enforcement investigations, but from research conducted by the Bureau of Economics' economists, including Drs. Jim Lacko and Jan Pappalardo.

We are clearly at an important decision with

respect to public policy and the stakes are high. Regulations and policy decisions made today will affect consumers' mortgage and home ownership opportunities for years to come. Many stakeholders are involved in this important market. Today's scientific discussion of the economic issues and merits of existing and proposed regulations will help us better understand the root cause of the problems, as well as the potential benefits and costs of alternative proposed solutions. Regardless of which solution policymakers ultimately adopt, there are sound economic reasons for improving the flow of information to consumers in mortgage markets.

Our first session this morning will focus on recent developments in mortgage market products and provide us with a better understanding of how mortgage products and mortgage markets have evolved. Over the past decade, changes in the market include the rise in prominence of mortgage products like hybrid ARMs, payment option ARMs, interest-only loans, no down payment loans, piggyback loans, no documentation loans and other loan products that are of some controversy today.

Some suggest that this evolution represents an attempt to expand markets to include previously under-served groups of consumers, thus broadening access to the American dream of home ownership. Others suggest it was

a scheme by unscrupulous lenders to prey on unsuspecting consumers. And still others, that it was a response to secondary market investors pursuing higher rates of return. Similarly, some explain the increased use of prepayment penalties as a reasonable method for controlling loan risk and offering lower rates to borrowers, while others suggest that they are a way of locking misled consumers into predatory loan terms.

Scholars on our first panel will help us understand the root causes of the evolution of mortgage markets. This is a crucial first step in understanding the source of the current problems and to crafting economically sound solutions.

Our second session this morning will focus on the information that consumers receive about mortgage products, how well they understand that information, and its impact on consumer choices over loan products and market outcomes. Distinguished researchers on this panel will address a number of fundamental issues, including the mechanism by which consumers are presented mortgage information and how the framing of the information affects their choices. They will discuss whether information uncertainty influences consumers' choices over loan products and lenders' decisions regarding what products to offer and at what price, whether consumers

understand the terms of their own mortgage transactions, whether current information policy can be improved, and the role of advertising in mortgage markets.

In addition, panelists will share views on what the economics of information tells us about the role of information on market outcomes and the likely effects of regulations on mortgage information, and the lessons that behavioral economic research may provide for the analysis of mortgage information policies. This is just the morning.

After lunch, Chairman Kovacic will introduce our two afternoon sessions. In the first afternoon session, panelists will use their own expertise to provide perspectives on the relationship between mortgage information and the current problems faced by consumers in the mortgage market.

The final afternoon session is forward-looking, with a discussion of how consumer information policies could be developed to help prevent deception and delinquencies in the mortgage market. So, as you can see, we are in for a very full and exciting and intellectually stimulating day.

Let me conclude by thanking you all for being here and for taking the time out of your busy schedules to arrive promptly this morning. I understand that

several of our speakers actually rearranged vacation plans to be here, and I think that self-sacrifice is a great testimony to your interest to protect consumers and I only hope that you are not too deeply in debt with your families for doing that.

Finally, I would like to thank those that are responsible for this conference. I would like to thank Jan Pappalardo and Jim Lacko for taking the lead and planning and executing this workshop, and Micah Burger, Maria Villaflor, Alethea Fields, Neal Reed, Tammy John and Matt Eaton for handling the many burdens of the logistics in putting something like this on.

I will now turn this over to Paul Pautler, who is the Deputy Director of Consumer Protection in the Bureau of Economics, and he will be moderating the first panel. Again, I thank you all for being here and I hope you have a great day here at the FTC.

(Applause.)

SESSION I: ECONOMIC ANALYSIS OF MORTGAGE PRODUCT DEVELOPMENT, MARKET STRUCTURE AND MORTGAGE OUTCOMES

MR. PAUTLER: Thanks, Mike. We are here for the first session to discuss new products in mortgage markets and changes in the markets. Before we get to that, I have a few little housekeeping details I want to go over.

In the event of an emergency, quite unlikely, but if there is one, you should follow the FTC personnel who will lead you out that door, around to the right, down the hallway a little bit and down the stairwell. And you came through security on the way here this morning. If you leave the building, you will have to go through the same game once again. So, if you would rather avoid that, you can get some lunch at the Top of the Trades up on the seventh floor. I will give them a little plug. They have wonderful food, of course. And you can get almost anything you would want up there.

One other little piece of housekeeping, I guess, if you have cell phones on, please turn those off, both because they bother other people and they do not do a lot for our recording of the event.

For the questions and answers that undoubtedly will occur, I would like to hold the questions untill the end of each session, and then you can stand, give your

name and affiliation, and ask your question. I would ask that we do questions rather than speeches, but we will see how that works out.

(Laughter.)

MR. PAUTLER: Our first session, Mike already described what it would be about, and we have a number of distinguished panelists. I am not going to go through their entire bios, because, number one, you have them. Number two, it would take too long. We have a number of people that have spent, in some cases, an entire career in real estate and examining credit markets. Others who have done a lot of very recent empirical work to try to divine what has happened in mortgage markets recently as a result of changes in products and various innovations. We will hear, I think, a wide-ranging set of views in this first panel about how that has worked out.

I do want to give just a little bit of overview of who our speakers are. Susan Wachter, to my left, is from the Wharton School at the University of Pennsylvania. She is the Richard B. Worley Professor of Financial Management. She is one of the people on the panel that has been working in the real estate area for quite a while.

Anthony Pennington-Cross will be tag-teaming with Souphala Chomsisengphet. I am sure I got that name

terribly botched, but Anthony is the Associate Professor of Finance at Marquette University. He was formerly at the St. Louis Fed. He has done a lot of work in predatory lending and subprime lending while he was at the St. Louis Fed and now at Marquette.

Souphala is in the Office of the Controller of the Currency. She does work in financial institutions and credit risk underwriting, which must be a wonderful thing to be an expert in these days.

Then Christopher Mayer is the Director of the Paul Milstein Center For Real Estate at Columbia University at the business school, and this year he is visiting at the Federal Reserve Bank of New York.

And our second tag team on this session will be Richard Todd, from the Federal Reserve Bank of Minneapolis. He has worked on a number of home ownership and financial education issues while he has been at the Fed in Minneapolis and he is currently the Vice President in the Supervision, Regulation and Credit Division.

Tagging with him will be Morris Kleiner, who is from the Hubert H. Humphrey Institute of Public Affairs at the University of Minnesota. He holds the AFL-CIO chair there and he has been doing a lot of work on occupational regulation and its effects. They will be doing the fourth presentation.

So, I would like to get us started with Susan Wachter.

MS. WACHTER: Thank you, Micah, Paul, Mike, Jim, and Jan for convening today's meeting and for inviting me. It is a real pleasure to be here.

I was here about five years ago for a conference that Jim put together on economic perspectives on mortgage markets way before the current crisis began. But even then there were questions about mortgage practices and the need for policy to improve consumer choice. We came out of that conference with a data list. We have now had a natural experiment that provides some of the answers to the questions being raised even then, about how deregulation and profusion of non-traditional mortgage instruments impact mortgage markets.

I have been asked to speak about the history of the current crisis. First, it is important to emphasize the historic move to increased access to credit, not just in the U.S. but worldwide. At the same time, a worldwide boom in housing prices. There are three common drivers here, including a historic interest rate decline. Coming out of the 2001 recession, instead of having interest rates increasing, which is typical, interest rates declined, not only in the U.S. but worldwide. A second driver is capital market integration. Liberalization of

mortgage markets facilitated the integration of mortgage markets into capital markets, which increased access to credit. A third driver is worldwide economic growth at a fast pace up until recently.

But the U.S. is unique in the world in how mortgages are funded through securitization. Prior to 2000 in the U.S., securitization of mortgages allowed the transfer of interest rate risk to capital markets through Fannie Mae and Freddie Mac. What changed in the past decade is the development of private label markets, which facilitated the securitization of default risks. Traunching of securities by default risk is new and unique to the U.S.

At the same time, banks moved, to a large extent, to an originate-to-distribute model. And in the secondary market, securities were exempt from assignee liability. Rating agencies' incentives, everyone now is quite aware, were misaligned.

Markets work when you have buyers and sellers. Markets for securities lacked sellers. And the ability to short sell was lacking because securities were so specialized. They were marked to model, not to market. This market discipline that would have resulted from the active trading of these securities was lacking. The results was systemic risk and incentives for risk-taking,

especially one in which secondary markets lack assignee liability and trading. Broadly, there is moral hazard in an originate-to-distribute and marked model system. But systemic risk was heightened and prolonged by dynamics of housing markets.

We are all aware of the growth of nontraditional, nonprime, and what might be termed "aggressive" mortgages. But it is more enlightening to look at the specifics of the exotic mortgages and the timing of when they came to market. It really was not until 2004 when the huge ramp-up of exotic mortgage growth occurred. Interest only mortgages were a very small share of the market until 2004. Again, pay option ARMS were essentially zero until '04 and then took off. Negative amortization and interest only loans grew in '04.

Also, within these product types, there was deterioration of lending standards. Consolidated loan to value ratios dramatically increased. Also, full documentation loans fell. On the other hand, the dog that failed to bark, FICO scores were constant. That is what everyone was focused on. So, when pools were identified, they were identified by the FICO score, not by these other risk factors.

Indeed, another datapoint that is very important is the cost of borrowing, that is the premium over the

base interest rate. That did not increase. In fact, it was compressed. So, as additional risk was taken in the market, lenders did not require additional risk premia.

The result of this growth in credit, and in work with Andrey Pavlov, we document that prices increase. In cross-section work in which we look at the specific type of loans and where they were made by zip code, we see that aggressive mortgage lending resulted in (using instruments for the aggressive mortgages) price run-ups. There was an increase in subprime over time, and then, the shock of the tremendous withdrawal of lending, once defaults did rise. The withdrawal of lending itself causes price declines. The result is the unprecedented surge in defaults as prices plummet and loan-to-value increases.

Borrowers could not be aware of this systemic risk. We are in favor of choice generally, and risk-based pricing allows more choice, but, of course, the question is, is this informed choice? And, is this informed risk-taking? Asymmetric incentives were such that loan fees for originators were higher with greater risk.

Yield spread premiums which increased with risk went to the originators of the mortgage. So, it is not just the existence of asymmetric information, but market incentives to create asymmetric information. Hyperbolic discounting, Professor Laibson will be here this

afternoon, I can leave him to that. But how good are borrowers, how good are we at making choices over time is the question. And, of course, perfusion of choice, complexity problems, we know about behavioral finance issues there.

Another factor is shopping difficulty. It is nearly impossible in the subprime world to shop, and others will elaborate on this. Borrowers looked to the affordability of initial mortgage payments as opposed to long-run rates. The easing of standards had price effects on housing markets, but did not increase the price of risk in mortgage markets. While risk increased, additional risk was not reflected in risk premia. Therefore, it could not feed back to borrower's behavior. On the other hand, for the short run, these mortgages did become more affordable over time, and that drove housing prices. A disconnect resulted in the normal supply-demand linkage for informed choice back to market stimulus.

This would not have happened if the U.S. as a whole was more like the markets of Texas and North Dakota, for example. Markets with a huge increase in demand for housing did not see an increase in housing prices. So, we did not have capitalization of price expectation effects there, but we did in more than one-third of America.

Why? Why now? Work by my colleagues, Todd

Sinai and Joe Gyourko at Wharton, points to the new importance of regulation in increased supply inelasticities. I think we have a system that is more vulnerable now to increases in demand because of new supply inelasticity. With the expansion of aggressive mortgage lending in non-affordable markets, the result is a procyclicality of risk-based pricing. Remedies should include implementing the Federal Reserve proposals. We need remedies on the industry side as well. We should be revisiting Basel II, securities trading reserving, as well as insurance issues. Thank you.

(Applause.)

MR. PAUTLER: Thank you, Susan. Our next speaker will be Anthony Pennington-Cross and he will be tag-teaming with his coauthor Souphala Chomsisengphet.

MR. PENNINGTON-CROSS: Souphala, how do you say your last name?

MS. CHOMSISENGPHET: It is Chomsisengphet.

MR. PENNINGTON-CROSS: I have known Souphala for, I don't know, six years and I have never said it right. So, congratulations.

So, Souphala and I are going to break up this presentation. We are going to get a little bit more of the nitty-gritty, look at some products and see how they changed through time and see how they have changed in

space. So, we are going to put up some maps up here and see where loan documentation first was introduced and how it spread across the country. Interest only loans, balloons, prepayment penalties, all of these features that we have been hearing about in the news and there has been lots of discussion about.

When you look at these, try to think of why in subprime we see a lot of these types of loan products. For me, the important thing to remember is this is subprime so these are cash-constrained borrowers and these are credit-constrained borrowers. There are a certain group of folks that are heavily constrained and they are looking for some credit, right? They are looking to leverage their home. And their house is one of the only assets that a typical consumer, especially someone who is in a little bit of trouble, has access to credit.

So, this is actually a work -- Souphala and I and Susan's part of this, this research also, and then we've got Raphael Bostick and a couple of other folks, too.

So, again, we are using the loan performance asset-backed securities data set, so you need to keep that in mind. This is basically loans that get marketed in the securities market as subprime. And they have not been marketed as prime, okay? And they have not been marketed

as Alt A. So, Alt A and subprime, there are quite clearly Alt A loans in this data set and there is quite clearly the ability to substitute for. Alt A is alternative. Alt A is typically loans -- historically, people say typically it is loans for people with good credit scores but do not fully document their income. However, you have people with good credit scores that do not fully document their income in this data set, also. So, just keep in mind it is a securities, data set and it is in the ABS market.

We will be looking from 2000 to 2007, about the middle of 2007. We have left to go through 2008 and we will get there at some point. The total number of originations that we see in this time period is about 16 million loans. We're going to be flipping through product types, loan types and borrower types.

So, Susan already gave, I think, a little bit of duplicate information. I just saw through the back of my head Susan's slides. But this is just a story that we all know. Subprime grew a lot. Quite dramatically, right? And this is the securities portion.

And then in 2000 -- we have work through July there. So, you can see 2000 the market was starting to dry up. I think today it is -- I do not know if it is largely dried up, but there are not many securities being issued today. So, that is just to give us an idea of the

size of the market.

How about products? Here are the products we are going to be looking at. There is a little mislabeling here. So, the ARMs, when you see something with an ARM up there, they are ARMs that are not interest only loans and do not have balloon features, and when you look at that, in this data set, about 96 percent of those are hybrid loans. So, these are typically 2/28s in subprime or two years fixed, and then 28 years, where they turn into an adjustable rate loan, and those are typically indexed on Libor and reset every six months. So, if you have a big teaser, you are going to be at the teaser rate for two years and then the reset comes in the 25th month.

Then, we have fixed rate loans, again, those that are amortizing and do not have balloons on them. Then, we will separate out the balloons and the IOs. . So, those are the parts we are going to be flipping through and, again, trying to think about why credit-constrained, cash-constrained borrowers might want to use these type of products.

So, ARM, which really means hybrid, about half the market over this time period was hybrid and the other half was fixed rate. Over time, there is a growth in the use of the interest only product, especially on the fixed rate side. But, you know, balloons grow through time, IOs

grow through time. But kind of traditionally, in the early 2000s and late 1990s, there were 2/28s and fixed rates, splitting the market pretty much 50/50.

Here's a look through time, and you can see that the fixed rate, which is -- good, it shows up okay. The green lines kind of decline, so fixed rates are becoming a little less important part of this market through time. The red lines, those are the 2/28s, again, kind of declining a little bit over time. And then we have the balloon line. So, balloon is growing, so kind of what people call exotic or mortgage exotic features. The use of balloons, the use of interest-only features have become more important. You especially see a pretty big increase in 2003, 2004 and 2005, of the IO ARM.

So, why did the subprime market use these? Let's take a look at some maps. And I think this gives some hints about where these products first showed up. You will see, there is a pretty strong pattern about where they showed up. You probably already have a pretty good idea. So, we are going to flip back and forth. Again, these are really 2/28s. You see that word "adjustable rate." Just think hybrid, hybrid loans, 2/28s.

So, what we are looking at here is the fraction of loans that were 2/28s in each county in the United States using the LP data in 2000. If it is white, that

means we had no data. We had one data error down there in Dade County. That does not mean there are no subprime loans in Dade County. There are plenty of subprime loans in Dade County. We have a code switch in there, so it just dropped out of the data. So, I am pretty sure that the missing data down that swath coming down the Dakotas, those truly are missing. That is not a technical error. There are actually relatively few subprime loans there.

So, we can see that the 2/28s in 2000, over there in California, they were kind of where theirs were popular and that meets my prior that I always thought that Californians, from the stories I heard, I call them ARM happy. So, their ARMs were an important mechanism in California. And, typically, the story goes, you want to use an ARM, when it gets a little too expensive, right? So, you can get that initial payment down. It helps you to get into that house.

By 2006, the rest of the country starts using the 2/28s, and the West Coast starts to use 2/28s a little bit less. So, it is still a prevalent part of the market, but there is a decline. And also, it's where we are here in the Washington, D.C. area, also using those 2/28s a little bit less relative to the rest of the U.S. So, I think of those places as, I think, expensive places. So, it is kind of a theme.

Let's take a look at interest-only loans. We also hear a lot about interest-only loans in the newspapers, and back in 2000, less than a quarter of the loans were using IOs and there was almost no -- I am sure there is a special variation there, but I am not picking it up with my rather crude categories.

By the time we get to 2006, we start to see places using IOs much more. Again, this is along the California coast, down there -- a little bit down there in Florida, and again in it looks like in Virginia and the Washington, D.C. area.

If we clicked forward to 2007, it has become even more prevalent in the D.C. and New York and Boston areas, also. So, you've got IOs coming up, the 2/28s kind of dropping down, all in these kind of expensive locations.

That is Minneapolis up there in the middle, I believe, okay. Minneapolis did pass a predatory lending law, and, in my opinion, it was not a particularly strong law in terms of its extensive restrictions, and this may be part of -- well, one potential consequence.

So, here is 2000. Here is another thing we hear a lot about. We could get someone into a house if we give them a 20-year or a 30-year loan with a 40-year amortization and have a balloon payment at the end. So,

that is another way we can get the initial payments down for a borrower.

So, balloons, you know, 2000, I see no pattern, okay? So, we just have a little mishmash there. Not overly prevalent. By 2006, balloons are being used dramatically across the United States. The whole West Coast is using balloons quite heavily. Again, down in Florida, you can see Boston highlighted, Washington, D.C., this time we have Chicago and Minneapolis again. I would call all of those places where it has gotten expensive to buy a house by 2006. So, if you are purchasing a home, this is one mechanism to help you get into it.

So, I would tend to call all of these measures "affordability mechanisms." It is not traditionally how we think about affordability, but these are types of mortgages that make it more affordable for you to go get into a house or to buy a bigger house.

And then the last little swath of balloons you see up there is in Michigan, right there at Lake Michigan over to Erie. So, there are kind of two types of affordability, right? There is the affordability -- because prices have gone up a lot, and then there is the affordability because wages have gone down, or there is lack of jobs. There are two ways you can end up in an affordability bind.

Let's take a look at prepayment penalties. One of the key things about subprime is that there are a lot of prepayment penalties. In our data here, over half, almost 60 percent over this time period, had prepayment penalties on them. In addition, if you look at the hybrids, I believe about three-quarters of the hybrid loans had prepayment penalties on them. And I think it is about 40 or 45 percent of the fixed rate loans had prepayment penalties on them.

Here's a look at 2000 and let's just clock forward to 2006. This is the first map where we have seen the states kind of suddenly appear. So, this has been county data, the splotches that have shown up, the dark colors showing what is more prevalent, whatever I have been looking at, have all been kind of metro driven. We saw Minneapolis, we saw New York pop up or the West Coast, but we have not seen states.

When we look here, you can see the light colors meaning that there is much less use of prepayment penalties we see in North Carolina, South Carolina, Georgia, New Mexico, Michigan, Connecticut. Those are all showing dramatically lower use of prepayment penalties in the states by 2000. And there is a big click. Many of these states kind of get lighter from 2000 to 2006. The reason that these states start to use fewer prepayment

penalties is because of the passage of predatory lending laws in these states over this time period. So, a lot of these predatory lending laws restrict the use and availability of prepayment penalties.

So, one thing that I think we are concerned about is that when you -- so what are prepayment penalties? Prepayment penalties are yet another mechanism to get your monthly payments down, right? If you are willing to take on that penalty, you should get a break on your interest rate, and your monthly payments will be reduced. So, if you take away -- so, I would call that another affordability mechanism, a way to get you into the house. Whether that is a good thing or a bad thing is another question. But it is definitely an affordability mechanism.

And if you take that away, the lenders are going to look for, and the borrowers, are going to look for something else, right? And some of our empirical work shows there is a strong relationship between the turning on of these prepayment penalty restrictions and the increased use of interest-only loans. So, we have preliminary evidence that IOs look like the choice substitute for loans that had prepayment penalties on them. So, in some sense, we have had a policy experiment here that has made places like Illinois there look more

like California in terms of its mortgage usage than it would have without the law.

I mean that because IOs are an important part of California, because they are a great affordability mechanism, and if you take away the prepayment to get affordability, you are going to end up with more IOs. So, that is basically what I have here.

So, my feeling is, why do we have these types of products and subprime? It is because of affordability. These are ways to get you into the house.

And that is going to be it for me, and then Souphala is going to come up and work through the second part of this presentation. This is just kind of a dramatic graph. It did not fit in well, but there were a lot of balloons in 2006.

MS. CHOMSISENGPHET: I am going to break my presentation into two parts based on Anthony's. I am going to first describe the type of loans that were originated during this same time period, and then the type of borrowers who used these type of loans. So, let's begin with the loan type.

This is distribution of mortgage originations by loan purpose. I just want to draw your attention to the red portion of the pie. We see that almost 45 percent of the loans originated during this time period are cash out

refinance loans. So, there are a lot of equity extractions in this market.

If we look at the distribution through time, we see that between 2000 and 2003, you know, almost 50 percent of the loans were cash out refinance, and then after 2003, between 2003 and 2006, they sort of declined a little bit and then began to pick up again after 2006.

There has been a lot of discussion about negatively amortized loans, and out of the 16 million loans that were originated during this time period almost 9 percent are negatively amortized loans. So, when we look at it through time, prior to 2003, there were almost virtually zero. But then after 2003, as you can see on the blue line, they really took off and steadily increased until 2007. That is where our data ends.

This is another product that has been in the press, teaser rate loans. As you can see here, mortgages that were originated with teaser rates really jumped in 2004, 2005 and 2006. So, to recap, we think that the subprime market, during this seven-year period, was definitely driven by a lot of equity extractions, and then a lot of affordable loan types.

So, who uses these types of loans? Let's look at the characteristics of these borrowers. I am going to start off with the loans that were originated by

documentation. This is the level of documentation that borrowers provide to the lenders. As you can see there, almost two percent of these mortgages that originated during this seven-year period originate under the "no documentation required" program. And almost 43 percent really provide what they call a really low level of documentation.

What's interesting, though, is if you look at this distribution through time, we see that the origination of the no doc loans remain relatively stable, but the originations of the low documentation loans steadily increased, and then I think so passing the origination of the full documentation type of loans after 2005. So, there is a clear substitution here.

And then if we look at the distribution across the country, they show up sporadically, some in California, in the northwestern states, some in the northeastern states, and in Texas and then in Florida. By 2006, however, you can see that in California, for example, it is really an intense use of low doc type of loans, and in the northeastern states, it has also become intense, and in Florida, it has become intense. At the same time, I think it has also spread to newer parts of the region, such as the Midwest, Wisconsin, Minnesota, Michigan and then the Mid-Atlantic States. So, that is

the prevalence of the low documentation type.

Now, this is the FICO score distribution, and as you can see here, the market is really made up of borrowers with really different credit quality. If you look at the orange part of the pie, nine percent of the borrowers have a FICO score that is greater than 750. But the red part of the pie, almost nine percent of the borrowers have a score of less than 550. And then another 40 percent is kind of distributed between the 550 and 650, and then 650 and 700. So, really diverse credit profile of the borrowers.

This is another important component of this market -- this debt-to-income ratio. Now, this debt-to-income ratio is the fraction of the borrower's monthly income that is used to pay mortgage. So, as you can see here, the orange part is where, surprisingly, almost one-third of these loans have a debt-to-income greater than 40 percent. So, that is quite a lot. And we think that this number is a lower bound because, as you can see, in the purple part of the pie, lenders are either not using or not reporting the debt-to-income ratios. So, therefore, that orange part of the pie could probably be bigger than it already is.

Now, if you look at the distribution through time, the green line represents the debt-to-income ratio

greater than 40. As you can see, this steadily increased, and suddenly by 2006, you see kind of like a drastic drop there.

So, to recap again, I think the descriptive statistics we just showed here are about affordability. These borrowers have a high debt to income. There is a lot of unreported income, and perhaps there is a weak credit profile. We think that perhaps future research should probably turn to assess whether this weak credit profile is a temporary issue or is it permanent, such that can these borrowers who took out these high-priced loans improve on their credit profiles and then transition out of these high-priced loans.

So, in summary, I think our descriptive evidence suggests that the subprime market is made up of borrowers who are cash and credit-constrained, and this is over the seven-year period. But we have seen a significant increase in products that allow borrowers to afford the monthly mortgage payment since 2003, such as the low doc, the IOs, and the balloons.

Thank you very much.

(Applause.)

MR. PAUTLER: And now Chris Mayer will give us his view of the subprime market.

MR. MAYER: Thanks. So, this is, I think, kind

of timed what we are doing quite well in terms of a progression. First, thinking about where we got into this program and sort of saying something about origination. What I am really going to focus on today is thinking about what has led to defaults. Here, I think there has been quite a big dichotomy between what I would sort of call rhetoric or myths, which is sort of a proliferation of many of the kinds of products that our earlier paper talked about and what has actually really led to the default problem. I think that dichotomy is a particularly important one to kind of understand in terms of policy.

So, this is based on a bunch of work that I have been doing. I should say that I was listed as a visiting scholar with the Federal Reserve Bank of New York. I have also spent the year at the Federal Reserve Board of Governors, working with Karen Pence, who is going to be talking later today, and we have put together a series of papers, three of these are actually sort of now -- at least two of them are publicly available and two of them you will see some pictures -- but they are still in a review process at the Federal Reserve Board. Of course, my comments do not reflect any views that the Federal Reserve had, as if anyone would believe they would.

So, there are a few takeaways. The first is what I sort of call dispelling the myths. There is very

little evidence so far -- actually, I take that back. There is quite convincing evidence that defaults appear really unrelated to many of the mortgage market innovations that we have heard talked about earlier, including prepayment penalties, including rate resets on short-term ARMs, 2/28s, 3/27s, floaters, various things like that and so-called interest only or option ARMs.

While this last category, particularly the option ARMs, are ones which we expect might create problems in the future, at least up to the moment, they are -- in fact, in that category of loans, we have actually seen fewer defaults relative to the broader set of mortgages.

So, what has caused the problem? Well, in a very proximate way, the unprecedented rise in foreclosures has, first and foremost, been driven by a stagnation and collapse in house prices. Now, this is clearly not -- it is not as if the world suddenly dropped house prices down. Clearly, it is related to what is happening in credit markets and subprime. But it is really important to understand how unprecedented the kinds of very, very quick house price declines that we have seen in markets are. There really is no history in the U.S., even looking at Texas in the sort of mid 1980s or New England in the early '90s of house prices that declined this rapidly on a

nominal basis.

I sort of cut my teeth doing early work looking at loss aversion and liquidity constraints in data in Boston. We never saw prices drop this precipitously in any of the declines. In fact, the only one that I know of in North America, there was one episode in Vancouver where we saw prices double and then fall in half over about a three-year period. So, it has been an enormously unprecedented decline in house prices, and it is important to understand that. I think it has a lot to do with the complete evaporation of credit for a large group of borrowers that were relying on subprime credit.

The second, obviously, is slackened underwriting. I am going to show you some data on that in a second. There have been a number of other people that have looked at this. And the third is just poor economic conditions in a subset of the markets.

So, let me talk first about prepayment penalties. I am going to spend a couple of minutes on this because I have some work with Tomasz Piskorski and Alexei Tchistyi at Columbia and NYU that sort of go through why prepayment penalties are around. I think this work does not make an assumption one way or another that people fully understood or did not. But one thing that is really clear is that people who took out prepayment

penalties got much lower interest rates.

So, the idea of a mortgage broker walking in and giving you, sort of throwing in a prepayment penalty in the bottom without giving you any benefit associated with that prepayment penalty, is clearly not in the data. Whether people understood the implications of prepayment penalties, I think is something that other people are going to talk about later. Karen and others are going to sort of talk about how people understand their mortgage product. But we should just get it off the table straight off, people did get benefits from these and I will show you that in a second.

There was a lot of criticism. Senator Clinton suggested that you eliminate prepayment penalties that lead to the high rates of default and I think, unfortunately, the causality has been reversed, which is, as it turns out, the people who took out prepayment penalties were very risky. That does not mean the prepayment penalties caused them to default more.

Why do I think prepayment penalties are not the devil that they have been made out to be? First, by the way, if you look around all industrialized countries as well as commercial mortgages, the United States and the Netherlands are pretty much the only two countries that actually allow people to prepay their mortgages. If you

move north of the border in Canada, I have a friend who sold his house moving from UBC to Toronto, he paid a prepayment penalty even selling his house. So, when we think about prepayment penalties, these are the norm around the world. The U.S. is the exception in allowing fully prepayable mortgages.

The reason we have prepayment penalties, at least theoretically, solves a very simple but important problem. Which is, if you want to lend to a risky borrower, you have to charge a high mortgage rate. As it turns out -- and I have two relatives who took out subprime loans, so I can at least have some personal experience in talking to them. Both of them were people who had gotten themselves into credit trouble.

And when you lend to somebody who has credit trouble, one of two things is going to happen. Either they are going to get their act together, and house prices may go up and they get a benefit. As soon as that happens, they are going to get out of that subprime loan as quickly as possible and refinance into a conventional mortgage with a much lower rate.

Or bad things can happen to them. Bad things could be house prices fall, it could be that they sort of lose their job. They sort of bump into their credit problems again. If those bad things happen to them, well,

they are not going to refinance, they are going to stay in the pool. So, part of the rationale for both the development, I think, of the 2/28 product was that people were over -- if you make your payments for two years, you are going to refinance out of the thing and go into something else. If you could not refinance at the end of two years, it probably meant that you did something wrong, or you got hit with a negative shock and the bump up in rates was intended to deal with that problem, that eventuality.

Now, that does not mean that there are not also psychological problems including sort of hyperbolic discounting that that product also takes advantage of. But there is a good sort of economic rationale for why people did this. In the insurance literature, by the way, people call this reclassification risk. So, this is a well-known problem in insurance.

And the nice thing about prepayment penalties is that they allow you to sort of spread the risk, so to speak. So, if you do not let people who have good draws get out of the pool right away, you force the people who have good luck to stay in the pool longer. They help cost subsidize the people who have the bad draws or the bad luck. And as a result of that, you can actually lower the initial interest rate associated with taking out a

mortgage, and that benefits people who are particularly risky, whose likelihood of default is very sensitive to the interest rate.

So, that is a relatively short explanation of a paper that will be on my website later on today, that many of you have probably seen kind of presented, that you can write out in very nice, dynamic contracting with my coauthors.

I am just going to show you three charts that suggest that the data are completely consistent with this observation. The first is just the fraction of the subprime ARMs with a prepayment penalty. This is all data from June 2003. We have done work extending this over longer periods of time, but you can see that the highest credit risk people, consistent with this idea of affordability product, are the people who take out loans with prepayment penalties.

Now, again, some consumer advocates have argued that this is evidence that these people were fooled into taking these products. The difficulty with that argument is that the people who took products with prepayment penalties received a loan almost 70 basis points lower than the interest rate on a loan without a prepayment penalty.

So, the idea that they got no benefit from the

prepayment penalty clearly is not supported in the data. Clearly, they did get a benefit associated with the prepayment penalty. Whether it is an optimal benefit or whether it is what would you get if you sort of worked out what the option value is, I think is a very complicated problem. But I think that we can observe that on the face of it these people got a benefit from a prepayment penalty.

Interestingly, the benefit was biggest for the highest risk people, because you will notice the difference between the lines with and without prepayment penalty narrows as the FICO scores go up. So, in other words, the biggest benefit associated with the prepayment penalty was for the riskiest group of borrowers. And, so, if this was just purely an interest rate option, such an interest rate option would not at least directly explain what is going on.

The third thing is evidence on defaults. This is sort of a place where I think people have really not controlled for sort of the kinds of people who are taking out prepayment penalties. You observe clearly the riskiest borrowers, those with FICOs under 620, have the highest default rates. So, that is not really surprising. Those people also take out more loans with prepayment penalties. So, if you do a correlation, you are easily

going to find the correlation between prepayment penalties and defaults.

The problem is, if you control for FICO, that correlation disappears. In fact, it actually goes the other way for the lowest FICO people. Default rates with prepayment penalties are actually lower than default rates without prepayment penalties. And that suggests that among this particular very, very high-risk group of borrowers, the lower interest rate associated with the prepayment penalty might well have both allowed them to purchase a house they might not have otherwise and actually potentially given them a lower interest rate for which they received some benefit.

So, that is the first piece and that is where I was going to spend kind of more of my time. I want to talk about some of the broader issues. That first set of stuff was really work that Tomasz and Alexei and I have been working on. The rest of this is work that I have done with Karen Pence and/or work that Shane Sherlund has done at the Fed. I am just going to highlight some of this work. This is all work that is going to be coming out in The Journal of Economic Perspectives later on this year and, hopefully, we will be able to get a working paper online in the next couple of months.

But the data is sort of fairly straightforward.

The first is just that rate resets are not a big problem. Part of the premise of the 2/28, 3/27 mortgages is that these people were going to get into trouble or they were going to pay off their loan and the evidence up until now is basically that that has been the case, which is only seven percent of 2/28, 3/27s, these are these short-term hybrid ARMs, had prepayment penalties that's tended beyond reset. So, people were easily able to refinance. They were not being locked in. The bulk of these borrowers were not locked in to their loans such that they could not refinance before they faced a rate reset.

And, today, the bulk of defaults, as well as the bulk of pre-payments, have occurred well before the mortgage reset date. In fact, if you look at the hazard rate of defaults, it is smooth through the reset date, which really is consistent with the idea that it is not a big rate shock that somebody gets at 24 to 36 months. What is happening is that the people who remain in the pools at that point are just people who really could not get out of these mortgages any other way and were likely to default whether or not they faced this big increase in rates.

That said, the lack of a refinancing market could completely change this process, and one should worry a lot about this, except for one other thing, which is the

large cuts in interest rates that the Fed has pursued suggests that most of the rate resets today, if we look at the loans rolling over in the next year to year and a half, will take place with a rate reset typically under 100 basis points. In other words, while rate resets would have potentially been a big problem if we had seen the credit markets evaporate without low interest rates, the fact that interest rates have come down has meant that people are not going to be facing large rate resets, when the sort of 2006 vintage, late 2005, 2006 vintage of subprime loans comes into the market.

The third thing is just the interest-only and option ARMs. I am not arguing that these are particularly great products. There has been lots of look at credit cards and people who make minimum payments on credit cards and the ability to kind of hang themselves, and there have been rules that have been portrayed to not allow people who make the payment to sort of see negative amortization, but that has clearly not so far been a big issue.

One thing which, I think, you know, in the paper that Anthony presented, you know, they are looking at subprime. The vast majority of option ARMs are actually the Alt A product. So, our evidence suggests even a much lower rate of option ARMs than you guys have in your data. We show very, very few of them actually showing up in the

overall loan performance database in the subprime. Almost all of them are showing up in the ALT A pools.

The thing is that to those people so far, negative amortization essentially means they are not making very big payments to stay in their loans. Well, if you are not making very big payments to stay in your house because you are negatively amortizing your mortgage, up until now you are not defaulting. Where we are going to worry is what happens when they hit that 125 LTV cap.

So, the problems for negative amortization may well be to come and those things are going to show up in the so-called ALT A pools. They are not primarily going to show up in the subprime pools because that is where most of the option ARMs were, and if one looks at interest-only loans one sees -- this is work Shane Sherlund has done -- very small decreases in default rates up until the sort of interest-only period expires and very small increases in default rates after that point.

This is the sort of scary picture -- this is the percentage of people in a given month who make the minimum payment, that is, who are negatively amortizing their loans. I think these things were misnamed. These are not option ARMs. These are negative amortization loans. Virtually everybody takes the option to make the minimum payment. You can see that 60 to 80 percent of those

borrowers every month are making the minimum payment. That is, they are negatively amortizing their loans. This is potentially a very large problem to come, but one which we have not seen so far. These option ARMs actually have lower default rates than other loans up to this point.

So, what happened? Well, if we look at the data, this is data looking at loan vintage for California, Florida, Arizona and Nevada. That is the places where house prices, according to the recent Kay Schuler (phonetic) stuff, have dropped an astounding 20 percent in a year and a half.

If you look at those locations, and the dotted line is the rest of the U.S., for the '04 loans, you can see the rest of the U.S. had much higher default rates out to 42 months than those states did, when house prices were going up enormously. As house price appreciation slowed in the '05 vintage, this is when house prices really started to collapse, after about two years for the '05 loans, this is 2007.

And you can sort of see that this reverses itself. So that in 2006, it is the California, Florida, Arizona and Nevada loans that have much higher default rates than the U.S. does. In some cases, double the default rates. The unprecedented rise in defaults is very highly concentrated in those four states, where we have

seen significant negative house price appreciation, and this is the data from 2007, which is showing the same pattern.

So, house price appreciation, endogenous clearly, is a big, big factor for what is going on.

The second is just, if you look at the underwriting, look at observable loan-to-value ratios. People talk about this split between adjustable and fixed rate and, clearly, the adjustable rates have terrible default experience. They also had the worst quality borrowers. If you look at the median cumulative loan-to-value ratio for purchase loans, you can see that that was 100 percent. People were putting no money down. The median in the United States purchase loans in '05, '06 and '07 in the subprime pools was 100 percent. In the Alt A pools, it was 95 percent.

So, these were people who were putting no money down, and as it turns out from work that Shane has done, the existence of a piggyback loan, even controlling for cumulative loan-to-value, is another signal that indicates higher ratio of defaults and fully a quarter of those people who were using piggyback loans in '05 and '06, and what we are really going to sort of think of is the nightmare vintages of subprime loans.

The other thing is just unobservable stuff.

Investors could all see that. This is Susan's point. There are also unobservable issues and this is just the fact that these loans, when they originated, some of these loans just experienced very, very early defaults. These are 90-day delinquencies. You can see that, you know, in the 2007 loans, one year out, for the loans that have been originated so far in early '07, 16 percent were 90 days delinquent, meaning you missed three months of payments in the first year. Sixteen percent of them. In 2006, that was about 10 percent.

These are completely unprecedented kinds of defaults for mortgages and, clearly, these mortgages were given to people who really were either speculating or had no realistic ability to make these payments. I sort of am guessing more on the former than the latter, and these are much more concentrated on purchase loans than their refinancings.

So, if one is worried about appraisal bias and all of these other problems, refinancings, as I will show you, in the dotted line, have performed much better than purchase loans. The big spike in defaults has been purchase loans. And this is -- people typically do the cut on ARM, FRM, but I think it is useful to understand it is the new home buyers that came into the market, particularly in '05 and '06, with affordability products,

who are walking away from their houses at rates that we have just never really seen before in mortgage originating.

And I put this up on the Alt A just for sort of a benchmark. People never usually use the same axis on these things. I thought it was useful to show you that the Alt A loans, which had almost all of the exotic products, the use of negative amortization, the use of interest only, three-quarters of Alt A loans had neg ARM or interest only. A quarter of Alt A loans had investors versus 9 percent of subprime. By almost all observable measures, except FICO, the Alt A loans had all the exotic features. Their default rate so far has been better. So, understanding that this so far has not been the exotic features, it has been who they lent to.

So, where do we go from here? This is my last slide. I think government policy has to understand that if we do not have a private mortgage market, and by private I do not mean the GSEs, we have a trillion dollars to replace. In my view, the reason house prices have fallen this quickly is because we completely erased mortgage products that served marginal buyers, and we not only got the ones who probably could not afford it, but we also have gotten the ones who probably could afford it at this point. Just erasing a large class of buyers from the

market is surely driving house prices to do things we have just never seen them do.

The second thing is I think we need to be very careful about consumer protection regulation. In understanding how the specific products caused problems, we need to worry a lot that people understand what they are getting. But I think, for example, a fixed rate mortgage with a well-disclosed prepayment penalty; i.e., what you have in Canada, or just go on any website and look in many parts of the world, may well be a good product for risky borrowers because it lowers rates and encourages risk sharing which for any risky borrowers, whether it be in insurance or in mortgages, is a good thing.

And the last thing is clearly legal changes that allow cram-downs and require "negotiations," where you have taken two hands and pushed the lender to the table, almost surely reduces the supply of new credit. It is really important to understand we will not get out of this mess until we have a healthy functioning origination market for mortgages. And the more that you take away the rights of lenders -- and work that Karen has done has shown this clearly -- the less people are going to be able to borrow in the future. Lenders are not stupid. There is lots of, lots of evidence that taking away creditors'

rights has the effect of reducing credit, which will have the effect of causing house prices to continue to fall, and this is a place where we really have to be careful with policy.

MR. PAUTLER: Thank you, Chris.

(Applause.)

MR. PAUTLER: Our final presentation in this segment will be done by Richard Todd and Morris Kleiner. They will be tag teaming.

MR. TODD: My balloon comes due next year. It's in your Minneapolis numbers, but it is okay, I think.

(Laughter.)

MR. TODD: I got into the hotel late last night and saw CSPAN had the National Governors Association talking about this. My governor and Pennsylvania's were touting mortgage broker regulation. So, there are a few things to say about mortgage brokers and licensing of mortgage brokers.

I am going to jump right in in the interest of time. We are talking today about how consumers process information in the mortgage market and how to protect them from mistakes and enhance their gains from trade. I think from that perspective, mortgage brokers are both interesting and important. The dynamics alone that you see on the slide are kind of dramatic. Rapid expansion

for 20 years and now, in the industry, a contraction both in market share and in number of brokerage firms, based on estimates from industry experts, at the end of the chart there.

Brokers' function is to enhance trade by lowering transactions costs and solving information problems, a positive role in the economy, and there is evidence that many mortgage brokers have done that. However, brokers have opportunities to mislead and take advantage of consumers and lenders, possibly leaving consumers and lenders with little gain or even a net loss from trade.

There are anecdotes that attest to abuses by some brokers. The housing slump and the markets retreat from the vertically disintegrated model of mortgage origination that Chris was talking about, that retreat has hit the broker industry hard. The estimates here suggest about a 50 percent decline in the number of brokerages from 2006 to maybe 2009 is likely.

Policymakers have responded to the stories of the abuses and the problems in the market with tighter regulations already and proposals for more, including stricter occupational licensing requirements for mortgage brokers that we are going to talk about.

Since a lot of people here know these issues

actually better than we do, we are going to cover them only as background to our empirical work on state licensing, state licensing requirements for mortgage brokers. And I am going to quickly summarize that for you right up front. Before that, let me note that, like Chris here, I have to say that Morris and I are speaking for ourselves today and our views do not represent those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.

These [referring to the bullets on a projected slide] are our main points, the core of our results so far. Most forms of broker licensing have had little discernible impact on market outcomes that we can find in our study period of 1996 to 2006. This includes numerous requirements for mortgage broker education and experience, which casts doubt on the relevance, at least to mortgage brokers, of models of occupational licensing that stress human capital.

However, we did find one licensing provision, that brokers maintain either a minimum net worth or an occupational surety bond that is at least statistically associated with the effects in both the labor market and the mortgage market. However, the nature of these associations, as shown on this slide, in the sub-points there, is at best ambiguous regarding consumer welfare and

at worst not inconsistent with a Milton Friedman view that occupational licensing mostly hurts consumers by creating barriers to entry. And Morris is going to discuss the regressions that lie behind those associations in a few minutes.

I want to briefly note some additional points to the work, however. There are not that many empirical studies that have looked at mortgage broker licensing. The main exceptions, by El Anshasy and others, and by Backly and others, examine only a few states. We were lucky to make use of Cindy Pahl's much more complete index of state mortgage broker regulations for this '96 to 2006 period. That index is available on our website and the final slide tells you how to find the whole data set.

We also need, I think, further theoretical work in this area. Perhaps the most complete model I know for addressing mortgage broker controversies might be Yiting Li's Middlemen and Private Information, but I really can't think of any theoretical model yet rich enough to cover the factors listed here on the slide that come into play.

Accordingly, we are going to report -- basically reduced form results focusing on the sign and significance of the coefficient on mortgage broker bonding and net worth and how it relates to market outcomes.

Before I do that, I want to comment a little bit

about surety bonds. They play a key role here and are also not very well studied. I want to talk about how they can be a barrier to entry. If a broker violates specific licensing provisions in a state resulting in a claim owed to a customer, the customer can have trouble collecting the claim from the broker. To resolve that, the states often require brokers to buy each year a surety bond from an insurance company, say, for $50,000 or so.

Then if a claim arises, the insurance company will pay the customer, making it easier for the customer to collect, and the insurance company then goes and gets its money back from the broker. Therefore, the bond is essentially a mechanism for the insurer to lend money to pay the customer and then get repaid by the broker. So, it is like a line of credit and it is not that the broker actually has to put up all that money in a bank account or something.

Creditworthy brokers easily qualify for a bond and they pay relatively little for it, perhaps 1 percent or less of the bond. Like $500 for a $50,000 bond. But if you have defective or a thin credit file, you may simply be denied a bond and not be able to practice in the industry or you have to pay a lot more, a subprime surety bond, if you will, paying perhaps 10 or 15 percent, like 5,000 bucks a year for a $50,000 bond, and that is a

barrier for people.

I am going to close my part by talking about a few key characteristics of the industry, fitting the first panel theme here. Most mortgage brokers, their role, again, is to make and facilitate loan transactions. They do not actually take on credit risk. They are not providing the funding for credit risk purposes.

They convey information to borrowers. They convey information about the array of loan options. To lenders, they convey information about the borrower's qualifications. In this capacity, brokers provide marketing services as well, helping lenders reach borrowers. For example, brokers were important in enabling upstart mortgage banks to rapidly gain nationwide market share without establishing their own branch network. They help existing commercial banks penetrate new areas, too.

Brokers can help to hold down loan processing and closing costs by performing the paperwork and handling of loans efficiently. Their most direct competition comes from loan officers who work directly for mortgage lenders. These loan officers mostly perform the same functions, but work solely for their employer. The line, therefore, separating brokers and loan officers is especially thin. In some cases, the case of correspondent lenders, these

are lenders who do not really take much credit risk, they quickly resell loans to others at prearranged prices.

So, a lot of the controversy in mortgage broker regulation turns on whether independent brokers and the in-house loan officers should be treated equally because many existing and proposed regulations apply differently to the brokers versus the lenders' own loan officers.

Based on data through 2003, most of the mortgage brokerages are small firms with one office, about 10 employees, five or six brokers, one or two managers. There are, of course, larger firms as well as a fringe of very small firms, including part-timers.

The industry's rapid growth that you saw on the first chart since the late '80s did take place mostly at the extensive margin. That is, they added firms without increasing firm size very much. So, I think that points very much to the potential importance of barriers to entry in this industry.

Brokers' compensation is controversial. That has been alluded to already. They are typically paid on commission for each loan they help originate. This often includes a fee set at a percentage of the loan amount that the borrower pays directly to the broker. But it also includes a payment -- often, it also includes a payment from the lender to the broker, called a yield spread

premium, and they are especially controversial.

As a number of people have pointed out, they can be thought of as negative points in return for a higher interest rate that you are going to pay. The lender provides cash back at closing, typically, credited to the broker. This can be a useful way for cash-poor borrowers to finance a portion of the broker's overall fee or other closing costs, but controversies arise because borrowers often have little awareness or understanding of these payments and because the payments give brokers an incentive to steer borrowers toward high-priced loans.

To mitigate the potential for abuse, brokers are required to disclose these yield spread premiums, but research by the FTC, Fed and others suggest that the disclosures are often ineffective. Similar payments are also made in the competing origination channels with correspondent lenders and their in-house loan officers. But in those cases, the same type of disclosure is often not required, and that adds to the controversy.

A number of proposals have been made to limit the potential abuse in mortgage brokering, including tighter broker licensing. And on that note, I will let Morris discuss our results.

MR. KLEINER: I am delighted to be here. I am going to be looking at this issue from a very different

lens, that is from the view of occupational regulation. And as a quick background, occupational regulation in the U.S. grew from around 4 or 5 percent in the 1950s according to some recent analysis that I have done with Alan Kruger at Princeton up to about 29 percent. This is an area that has experienced very dramatic growth, both at the state level, sub-state level and really at the national level as well.

Just yesterday, I was called by the director of an association who represents data entry workers at hospitals around the country, and management information systems, seeking information on what would happen if their occupation became regulated and to the extent they should try to seek regulation at the state level as well as what would be some of the impacts.

And I approach the issue of mortgage brokers and the real estate market, as I mentioned, from a very different perspective. And that is, a very important, interesting case study of the impact of regulation. Regulation in this area has really experienced some dramatic changes. But it does follow a consistent way of looking at occupational regulation. That is, individuals who seek regulation or state legislatures who try to regulate a particular occupation traditionally have different criteria. And they include education exams,

experiences that are necessary to enter a particular occupation. Often they require continuing education requirements.

Traditionally, there is a license fee, and the license fees serve as a way for the state or local government to pay for these occupations to be regulated, and for them to be monitored. In most cases, the fees are in excess of the amount that it would take to monitor these occupations. There tends to be background checks for issues of good moral character. And in most cases, with respect to mortgage brokers and the real estate market, there really is a requirement for bricks and mortar regulations. That is, a physical presence as opposed to an internet presence. That has been the issue of some recent Justice Department litigation.

There also are various legal forms that need to be presented and are required by both the industry, that is, the regulation of the industry as opposed to the regulation of the occupation. Almost all states regulate the industry. In fact, Alaska, as of July 1, 2008, will be the last state to impose regulation on the industry. But as of 2006, only 18 states required full occupational licensing of the occupation of mortgage brokers. And these included a wide variety of different requirements, including audited financial statements, and an issue that

we found of particular importance; that is, the minimum net worth or some posting of a bond that can apply to individuals in the occupations as Dick Todd mentioned earlier.

One thing that has been very dramatic in this industry and is consistent with occupational regulation in general is a movement toward greater regulation. In 1996, there were very few occupations that were regulated, because the occupation was a very new one. This is an emerging occupation which has, in turn, seen a very rapid growth in occupational regulation.

In terms of the number of these criteria that were required at the state level, it was about three of these requirements in 1996, and that has grown to well over eight or nine of these regulations in 2006, with greater variation in the kinds and qualities of these types of regulations.

Now, when we try to link what has happened in terms of regulations to what has happened to consumers, we find some very perhaps interesting results. We examined the information from 2001 to 2006, and looked at bonding requirements, as well as all these requirements together in terms of various specifications, using data from the American Community Survey and the Occupation Employment Survey, for the labor data, and Housing and Urban

Development, and HMDA information for subprime mortgages, and the Mortgage Broker Association information foreclosure rates.

What we found was bonding and net worth was particularly important, significant, and negative for brokers per capita. That is, the higher the requirements, the fewer the number of brokers across states. We found a positive five to seven percent increase in earnings where the requirements were in place or where they were tougher.

In terms of the effects that this had on consumers, we found significant and negative effects of these requirements for new subprime loans. That is, the tougher the requirements and the greater the requirements, the fewer the number of subprime loans. But we also found a significant and positive effect in terms of percentage of mortgages and foreclosures. Fewer brokers and servicing loans and linkages to the individuals who made the loans seemed to result in increases in foreclosures. Other broker regulations we found in terms of education, continuing education requirements, did not seem to have much of an impact.

We also examined the effects of these requirements in terms of high-priced loans for individuals making or getting these loans, in terms of the Community Reinvestment Act, and individuals who are in and out of

the assessment areas, and we also examined 10 broker-dependent non-CRA lenders, and we looked at the impact of these requirements on loan variables using census tract controls and other state regulatory variables. We found that bonding and net worth was generally consistent in terms of significant and positive effects for high-priced refinance, in both samples. That is, where the requirements were tougher, we also found that the prices were higher; that is we found a lot more of these loans being high-priced loans, which are 3 percent above the treasury bill rate.

In other specifications, we found marginally positive effects for high-priced purchase mortgages in broker dependent samples. Other broker regulations, which we mentioned earlier, in terms of education, continuing education, other good moral character factors were not significant.

Our conclusions were that there was certainly, as my colleague Dick Todd mentioned, a very dramatic growth, and now a decline in the number of mortgage brokers and regulations. Our theory is, as yet, really incomplete. Some theoretical presentations suggest that low margin subprime individuals tend to lose because of the lack of brokers, and therefore serving as a labor market intermediary. Individuals who have high quality

credit seem to gain as a result of these regulations. There is alack a very clear, causal story.

However, they are sort of consistent with Milton Friedman's writing of the market and the role of occupational licensing; that is licensing is mainly an entry barrier that raises prices and cuts the quantity of brokers and also reduces the quantity of loans, as well as their quality. It is difficult, at least in our analysis, to find any pro-consumer interpretations and it would be a very difficult to find its impact as being significant.

Contrary to many public policies, proponents of a greater occupational regulation, including individuals like Mort Zuckerman and others who are arguing for greater regulation of mortgage brokers, our results certainly downplay the role of sort of regulated human capital, that greater regulation results in greater knowledge and, as a result, being able to serve consumers in a very positive way. Certainly more analysis is needed, but broker licensing does not look like a silver bullet for curing abuses, although perhaps some additional analysis in this area is needed to perhaps tease out some of these more detailed effects.

If you are interested in some of our results, especially the regulation data, which was developed by a former student, Cynthia Pahl, who worked with the

Minneapolis Federal Reserve Bank.

MR. PAUTLER: Thank you, Morris.

(Applause.)

MR. PAUTLER: I am going to break into your break time for just a little bit to allow some time for questions and answers from the audience. Questions from the audience, not answers, of course. So, if anyone has a question. The woman in the back?

(Off microphone)

UNIDENTIFIED FEMALE: Hi, my name is (inaudible) and I have a (inaudible) question for Dr. Mayer. I take your point about prepayment penalties being a proper risk mitigation tool for lenders in some instances, but I think what we have seen over the past couple of years is a loosening of underwriting standards. So, what may have been reasonable, that a risky borrower would qualify for a mortgage at 6 or 7 percent, that they could pay that mortgage, it may be unreasonable to think that the same borrower could afford the mortgage at 9 or 11 percent. So, when we look a these mitigation tools by lenders, in the context of loose underwriting standards, where borrowers are not being underwritten at the fully amortized interest rate for that mortgage product, I think that is where the problem occurs.

So, my question is, when you said that borrowers

got an interest rate benefit, was that within the same product? So, two borrowers who are given a 2/28, if one of them had a prepayment penalty, is that where the interest rate benefit came in or was it across products?

MR. MAYER: So, the evidence I put up was all fixed rate mortgages. The 2/28s are a little more complicated, although I have looked at those as well in results that are not published and I found similar effects, which is to say people who took out 2/28s also had a lower interest rate. It is complicated to put a prepayment penalty in with the 2/28s because typically most of those expire prior to the reset.

As to your comment, I could not agree with you more. I completely believe that this is about the underwriting and the kinds of people that were getting mortgages. I think Susan's comment about originate to distribute is exactly right. So, I do not disagree at all with your premise that it really is the kind of people who took these loans out and the underwriting associated with that as opposed to the product itself. But, of course, that has very strong public policy implications because banning the product would have no effect on the underwriting, if underwriting was the issue.

MR. PAUTLER: Other questions from the audience? Yes, sir.

UNIDENTIFIED MALE: Thank you. For our friends from Minnesota, since I am talking to my state legislature about the licensing issue, what would your one sentence recommendation be on a state level about licensing or bonding of mortgage brokers?

MR. TODD: In the paper, we are very cautious ourselves and recommend caution on your part, too. We do not claim that --

UNIDENTIFIED MALE: That is why I want you to do it.

(Laughter.)

MR. MAYER: Yeah. Maybe I will take a short answer and let Morris because we might not totally agree. But I would say there are certain simple things you might want to do, like register people, certain types of background checks. Really aiming at the bad apples in a simple way, I think, is probably something I would be not too uncomfortable with. But when you start putting barriers to entry, like these financial barriers, I think you do risk cutting off competition. I think you do risk cutting off service, especially in emerging markets, traditionally under-served markets, where a lot of small brokerages were able to operate. So, I would be more comfortable doing some simple things, not the financial barriers.

UNIDENTIFIED MALE: Well, to add color to my question, I am from Arizona momentarily. The issue is that we have a very large Hispanic population, and the concern is, if we do, whether it is bonding or licensing, et cetera, that that will be the market, the percentage of the market that is most dramatically or adversely impacted by this legislation.

MR. KLEINER: I would agree that certainly providing information to consumers, either registration or certification, provides very useful information. But licensing really restricts -- or adding these additional bonding requirements for entry really restricts entry, especially among minority communities.

UNIDENTIFIED MALE: Thank you.

MR. PAUTLER: Yes, sir. Please identify yourself before you ask the question.

MR. LYNCH: Hi, I am John Lynch from Duke University. So, this is a question for Souphala. What is the economic rationale for why low documentation loans are a positive thing? What is the benefit? What is the welfare benefit for low documentation loans?

MS. CHOMSISENGPHET: I am not quite sure what the benefit is. I think we have -- have you seen any performance on the low docs? Did you look at that?

MR. PENNINGTON-CROSS: Want me to try that?

MS. CHOMSISENGPHET: Yes.

MR. PENNINGTON-CROSS: So, low docs were designed for people who were not reporting all of their income on their income taxes. So, these are people who own small businesses, like liquor stores, or people who work in your restaurants and bring us our food when we're ordering our food. So, they have basically a significant amount of income that does not show up on their as taxable income. And, so, those folks, that was the original intent of the low documentation, so they could get -- they had the money to service the loans, but they did not have the documentation of that income.

That was the original purpose, in my understanding, of the low documentation loans, and I think they worked reasonably well in that capacity when they were targeted to that original segment of the population.

MR. LYNCH: Who had down payments.

MR. PENNINGTON-CROSS: Who had down payments, yes. I do not think low documentation by itself is a problem, but if you put low documentation to 75 percent of the population, see California maps, and you put zero down payments, it is a significant layering of risks. I think it is a welfare benefit for those who have very low reported income to the IRS.

UNIDENTIFIED MALE: Are they being then now

misallocated so they originally were given to people for whom it was an appropriate fit but now it is an inappropriate fit?

MR. PENNINGTON-CROSS: That is my interpretation of the numbers that I see, yes. I just do not believe that the majority of subprime borrowers in California could not document their income. I could be wrong.

MR. McCALLUM: I am Andy McCallum from the Colorado Attorney General's Office. This is sort of a follow-up to Mr. Lynch's question. What social benefit do you see of marketing these option ARM loans on such a widespread basis, when my experience is it is not at all an appropriate loan for the majority of borrowers who are out there? And I think that question could be extended to other sort of risky features that are found in these 2/28 loans as well.

MR. MAYER: The one thing I will say about option ARMs is that you can sort of think about an option ARM as basically a credit line tied to a mortgage. We allow people to have credit cards to take on debt that is well above the amount of money they owe on their house. So, I think it is a complicated question to sort of think about this. If you sort of looked at a household's total balance sheet, many households have total debt that exceeds the value of their house, where some of that debt

is through their mortgage and some of their debt is through credit cards.

Part of the reason the 125 LTV loans developed was when people started getting tough on credit card defaults. Lenders discovered, well, gee, if we make the loan on the house, you will not default on it because we can take your house right away, but if we make the loan on a credit card and you do not pay, we cannot take away your house. So, the idea of the option ARM or the negative, the 125 percent LTV loan is to provide a secured way of doing a mortgage that people will pay, and so far, they haven't not paid. Although there are going to be some real questions as to whether they will down the road.

But looked at in isolation, it is hard to think about -- the option ARM is just a combination of other things that already exist in the market that are not illegal.

MR. PENNINGTON-CROSS: And let me also point out, the IOs and the option ARMs, those are, again, products which were important in the jumbo market before they spread into subprime. And, again, those were designed for individuals who had highly volatile, but large incomes, like lawyers and partners in law firms would often use these things because one month they would have a huge draw, the next month their draw would be next

to nothing. So, this gave them the ability to pay down their mortgages when they could not when it was required on a fixed schedule.

MS. WACHTER: Economists are generally in favor of choice. But missing in this is the overall picture: There was a loosening of underwriting standards over time, and an increase in the layering of risk. The easing of standards resulted in new demand which increased housing prices. This obscured the fact that higher defaults were inevitable given the additional risk. Was this predictable? Yes.

MR. PAUTLER: One last question.

MR. REINGART: I am Chris Reingart from the Office of the Comptroller of Currency. I have a question for Dr. Mayer. I am curious whether you were able to, or if you were not able to, whether your data would permit you to, as you look at the myths, to look at subsets of borrowers and whether, as how I understand, sort of looking at the large group of loans, of securitized loans, that prepayment penalties are associated with lower interest rates, and similarly, with your other myths? But if you were to look at subsets of borrowers, for instance, lower income borrowers or borrowers in certain types of market areas or borrowers from certain types of originators, whether there might be some categories of

borrowers for whom those myths are not myths, that are truths, or whether you were able to look at smaller -- if you were able to do that sort of analysis, whether your findings really extend to the sort of sub-analyses?

MR. MAYER: Almost surely there was some amount of fraud that took place and there were some people who were defrauded and misled in what they did. So, I would not make the claim that this is -- in every single case, people were, you know, always given the benefit of prepayment penalties, or even that it was the optimal benefit. So, we could look at that. I think that is actually on our agenda of things to do. But it is a little bit complicated without data mining to kind of search for it. Sort of like you look for clusters of cancer and then decide there is something wrong. There are other risk factors the woman from Freddie Mac suggested that go along with this. So, I think it is complicated, but there clearly were brokers who were misrepresenting and misleading people, and I would never say that was not happening in places.

MR. PENNINGTON-CROSS: But I just want to say -- I will say that Chris is not the only guy, the only person to find in research that prepayment penalties are associated with lower interest rates. So, there was some initial work on a non-profit. There were some econometric

problems and then there was a paper by Elliehausen et al. last year, and they found significant decreases in interest rates only. So, I think you have to accept that borrowers did get a rate cut in exchange in the subprime market.

MR. PAUTLER: I would like to thank everybody for the questions. We have gone over our time. So, we are going to reconvene at about 10:35. That is seven minutes from now and we will push the whole schedule back about ten minutes. So, we will begin at 10:35 with Session 2. Thank you.

(Applause).

SESSION II: ECONOMIC ANALYSIS OF CONSUMER INFORMATION AND MORTGAGE CHOICE

MR. PAHL: Good morning. I am Tom Pahl. I am an Assistant Director in our Division of Financial Practices here at the Federal Trade Commission and I will be the moderator for this next session.

In the first session, our presenters described the changes that we have seen in the mortgage products and in the marketplace in recent years. In this session, we will build on that solid foundation and examine the relationship between the information that consumers receive and the choices they make about their mortgages.

When writing a story, journalists are taught that they are supposed to answer the five Ws and the one H. Who, what, when, where, why and how. Hopefully, our presenters today will help to answer those questions in the context of mortgages. Who should provide mortgage information, what they should give consumers, when it should be provided, where it should be conveyed, why it should be given, and how it should be provided. A tall order certainly, but fortunately we have a very distinguished panel here today to help us sort through these questions:

David Laibson is a Professor of Economics at Harvard University and a research associate at the

National Bureau of Economic Research.

Jonathan Levin is an Associate Professor in the Department of Economics at Stanford University and a fellow at the Center for Advanced Study in the Behavioral Sciences.

Brent Ambrose is the Jeffrey L. and Cindy M. King Faculty Fellow in Business and Professor of Real Estate at Penn State University.

Karen Pence is a senior economist in the Household and Real Estate Finance Section of The Board of Governors of the Federal Reserve System.

Finally, we will hear from two FTC economists. Jim Lacko is a Deputy Assistant Director in the Division of Consumer Protection here in the FTC's Bureau of Economics. And Jan Pappalardo who is a Senior Economist in the Bureau of Economics. As many of you know, Jan and Jim have done extensive research on advertising and disclosure issues, in particular on mortgage disclosure issues.

The format of this session will be the same as the last one. Each of the presenters will come up, make their presentations, and then, time permitting, we will have as many questions from the audience as we can. We hope to finish at 12:05 so that people have time for lunch and then to get back for Chairman Kovacic's opening

remarks this afternoon.

Without further ado, here is David Laibson.

MR. LAIBSON: I think I know the least about mortgages of everyone in this room. I am here because I am a behavioral economist, and if I know anything, I know about the psychology of consumers. I want to talk about the curse of education today and I want to contrast competition that is protective with competition that may be unprotective.

So, in many settings, competitive forces lead consumers to become educated. If I mistakenly believe that Windows is a good operating system -- we were just, by the way, working on Windows-based machines.

(Laughter.)

MR. LAIBSON: My machine is a Windows-based machine. Apple will teach me that I am, in fact, mistaken. So, we understand who these two people represent.

But there are other markets where competition does not have any competitive -- or has limited scope in terms of its tendency to educate consumers. For example, in the mortgage market, there are lots of choices that individuals will make that may be beneficial to a mortgage originating firm, and there is no economic incentive for another firm to de-bias the consumer who was involved in

these transactions.

For example, who is going to say to a consumer, if you buy this large house, you will be spending too much of your income on housing? Stay in your old house and do not engage in the transaction. Or if you extract more home equity and spend it on current consumption, you will be spending too much of your income on interest, do not take out a home equity loan. Or if you refinance now, you will be giving up a valuable option to refinance in the future, you should not refinance now.

These are all truths, we think at least, in some cases, for some consumers, and the market does not have an incentive to inform individuals about these facts, because the person who is going to make money, or the firm that is going to make money, is the firm that is going to interact with the consumer who is, let's say, unaware of these possibilities.

So, I want to talk about something that Xavier Gabaix and I discuss as shrouded attributes. These are features or aspects of a product that are underappreciated by the consumer. So, a famous classical example is a printer. Everyone knows the price of the printer and very, very few people know the price of the ink and, of course, the ink is ten times more expensive than the printer itself. Well, in the mortgage market, there is an

analogy. There is obviously the current interest rate, which is very, very clear. And then there are many other prices which are perhaps less clear for some consumers. I do not want to suggest that all consumers do not see these prices. But, certainly, some consumers may fail to see some of the costs associated with a mortgage, particularly if those costs are stochastic and are delayed.

Let me keep moving. So, here is a quick model to get us all on the same page and provide a little bit of formalism. It is really very simple and it just lays out the concepts that I want to discuss. So, imagine a market where there is perfect competition. So, we are going to have firms, mortgage origination companies, mortgage brokers, perfectly competing with each other. There will be no rents for these firms. Imagine that the value of buying a house is V and that there is a cost of providing a mortgage in terms of the consumers' cost and that is, an apparent cost, P, and then a shrouded cost, PS. And let's imagine for the purpose of our conversation that PS is weighted by a factor, beta.

So, the consumer only perceives cost P plus beta times PS and, obviously, beta here is a value between zero and one reflecting imperfect awareness. When beta is equal to one, the consumer is perfectly aware. When beta is less than one, the consumer is failing to fully

understand or fully evaluate some of these shrouded or delayed costs.

Let's assume as well that the originating firm cannot push too many of the costs into this shrouded category. So, we are going to bound PS with some bound P bar S. You cannot put all the costs into that category perhaps for regulatory reasons or some other reason.

Finally, assume that the actual economic cost of providing this loan is C. So, what does equilibrium look like in this market? And, again, that is a competitive equilibrium. So, this gets back to what Chris was telling us earlier. In this model, because of competitive equilibrium, you cannot basically rip the consumers off. In competitive equilibrium, it is going to be the case that all firms make zero profits. So, when you create more costs in one category, you are going to end up having less costs in the other category. So, we are going to see exactly the kinds of trade-offs that Chris and others have documented. That is a competitive equilibrium condition.

Firms are going to minimize the perceived costs of their loans. They are going to do that by putting as many of the costs as possible into the shrouded category. So, there are shrouded costs. PS will be as large as possible. So, that is going to imply that the visible costs or the completely visible costs, P, will, in

equilibrium, be equal to the true economic costs minus the shrouded costs in this competitive equilibrium.

Now, we can have an equilibrium that is inefficient in this case. And how do we get an inefficient equilibrium? Well, if the economic cost, C, is greater than the true value to the consumer, which is then again greater than the perceived cost to the consumer, we may end up with consumers who are undertaking these transactions, even though it is value-destroying. And the condition, I have just rewritten it below, basically emphasizes the role that beta plays here. Beta, recall, is the ability to perceive all of these shrouded costs.

So, when beta is equal to one, the consumer perceives all of the costs in this transaction, all of the ways in which he is going to have to pay for this home. And in that case, there is no opportunity for an efficiency because C cannot be greater than V and then greater than C again. So, when there is perfect understanding of the cost structure here on the part of the consumer, there is no inefficiency.

So, let's think about a calibration of a model like this. Not because this has any kind of real empirical meaning, but it just helps us think about the magnitudes. So, if you think about the costs that are

shrouded, let's pick a round number, $40,000. But, of course, the consumer perceives most of those costs. Even though they are shrouded costs, the consumer will still kind of get the point that they are out there. Maybe she will not fully appreciate them. So, let's set beta equal to three-quarters. This consumer is aware of three-quarters of the costs that are shrouded. Of course, there are other costs that are non-shrouded.

So, in this simple calibration, you end up with an average dead weight loss for consumers who should not be taking out these mortgages of about $5,000 per consumer. Not a huge amount, not a tiny amount either in this, again, illustrative calibration.

Now, in this world, consumer education will not be profitable for firms. Firms have absolutely no reason to educate consumers because all that they will do is take sophisticated consumers and not change what they know, and when they look at unsophisticated consumers and educate them, they may actually drive them out of the market. They may actually get them to stop doing these transactions.

So, from a firm's perspective, providing education and transparency has absolutely no benefits. There is no ability to win over customers. There is no ability to increase your business. All you can do through

education and transparency is lose customers.

Now, I have asserted that this kind of shrouding exists. Obviously, it exists in theory on these slides. We should measure it. At the moment, we do not really know almost anything about the magnitude of these kinds of shrouding effects in real markets. This is a theoretical set of observations.

Now, there are three different ways that we can measure shrouding, and I think this literature is kind of getting off the ground now. One is consumer surveys, and I think Karen will tell us more about that later. Another is to actually do a structural estimation of these kinds of environments and determine whether consumers are making optimal choices where the structural estimation would incorporate all of the different factors that would determine the optimality of a loan. And the third is to look at learning dynamics, to look to see whether consumers begin a relationship in an i.e. fashion and then robustly change their behavior in ways that show growing awareness of the early mistakes they were making.

We do not have data like that in the mortgage market, but we do have data like that in the credit card market. So, here is work with Sumit Agarwal, who is going to talk later, John Driscoll, who is in the fourth --

Sumit is in the second row, John is in the fourth row -- Xavier Gabaix and myself. What I am showing you here are credit card fee payments as a function of account tenure using account fixed effects. So, these are all sources of variation for the same person as they go through their life as a credit card borrower. They begin paying lots and lots of fees. They are very apparently confused about this relationship.

And as their account becomes a longer and longer tenured account, those fees collapse. This suggests that they began the relationship in a state of confusion and then they ended the relationship with a much better awareness of how they could gain the credit card.

Now, obviously, mortgages are radically different. The stakes are so much bigger and it is all kind of determined at the beginning. But is it also possible that people who are taking out mortgages also go through a learning process where they initiate the mortgage, not fully understanding all the features, and only over time come to understand all the ways in which that contract is complicated?

Now, could the market for advice solve these problems? Could people go for advice to third parties and learn all the things they need to learn about what an optimal mortgage would look like?

Well, the first problem is that it is very hard to separate good advice from bad advice. The second problem is that in many circumstances, in fact, the vast majority of advice is bad.

Let me give you an example of that from another paper with Sumit and John. This one precisely on the mortgage issue. We studied refinancing advice. We looked at the 25 leading books and websites that provide refinancing advice on a kind of volume basis. Not one of these -- these are the leading 25, not one of these 25 provide a calculation of the -- these are not, by the way, banks, these are people in the business of saying, I am an advice source, I am an author of a personal finance book. These are, you would think, unconflicted. I think they are, in fact, unconflicted. Nevertheless, they are wrong.

Not one of them provides a calculation of the optimal refinancing differentials or a table of optimal refinancing differentials. They all provide a break-even rule. And as you know, the break-even rule is not the appropriate refinancing rule. That ignores all the option value of refinancing, if interest rates move further in the beneficial direction.

Most of the advice boils down to the following necessary condition for refinancing. Refinance if you can

recoup the cost, the closing costs of refinancing and reduced interest payments, which is, any economist will tell you, the wrong rule to use when thinking about refinancing.

So, advanced markets are problematic. Well, what about regulation? Maybe that is going to solve our problem. Here I am going to turn into a classical economist. Apparently, we economists cannot give up our training. I am actually rather skeptical of regulatory solutions. I do not think we should not think about them and work on them and try them. But the kinds of things that I have been studying lead me to believe that we are likely to be disappointed by regulatory interventions.

So, what are the kinds of solutions that I am discussing now? Well, we could provide consumer education. We could teach consumers to look for these shrouded costs and optimize accordingly. We could also regulate transparency. Compel firms to stop shrouding costs, to make the costs easier to see.

Let me show you some evidence now from different markets that make me skeptical of these kinds of arguments. This is a study that I recently did with John Beshears, James Choi and Brigitte Madrian, and we studied a new disclosure form that the SEC is promulgating. It is called a summary prospectus. Everyone is very excited

about this at the SEC. The Director of the SEC Division of Investment Management recently said the results should be disclosure that is layered in a manner that allows each mutual fund investor and each intermediary, analyst, and other user to quickly find and use the information that he or she needs and wants. And they proposed this new summary prospectus.

We actually rolled it out in our laboratory and we gave subjects real stakes, not 100,000, but 100. In fact, that was the scaling. And what did we find? Well, I want to contrast the subject choices using the old prospectus and using the new, improved, disclosure-great prospectus. So, if subjects had minimized fees, just to give you a benchmark in these experiments, they would have paid a fee of 1.82 percent of their assets.

In fact, when they had the old prospectus in our experiment -- this is all, of course, randomized, so there is perfect control groups here -- their statutory prospectus ended up with a fee of 3.73 percent. When we used the summary prospectus, we end up with a fee average of 3.71 percent. And when we go to the month horizon instead of the annual horizon, now we get a worsening of performance using the fee-metric.

So, here is a case where a lot of good minds sat down, came up with a good idea, and maybe it kind of has

appeal as a theoretical object. But as a practical object, making fees more salient, I do not think it is working.

Here is another example, even more shocking and upsetting. In this study, we worked with 400 Harvard staff subjects who were each honest to goodness given a $10,000 pool of money to invest. For real. We, for this period, took out a Hedge, so we were not, in fact, exposed to a $4 million short position. So, we gave our subjects $10,000 for real each and we told them to allocate money across four S&P 500 index funds, and we gave them the prospectuses from these funds.

Here is what they did. They ended up with an average fee of $518, which is well above the fee they would have paid if they had randomized across the four indexed funds. They did worse than randomization. Only 3 percent of our Harvard staff put all of their money in the low cost index fund. If they had minimized fees, they would have paid $255. If they had maximized fees, they would have paid $581. They are mostly failing this basic financial IQ test.

And then we went to the next step. We tried to use a super-strong disclosure intervention. We gave them a one-page sheet, in addition to the prospectus, and the one-page sheet said, here are the fees from the four index

funds. We are going to explain the fees to you as percentages. We are going to explain the fees to you in dollar terms, and we are going to lay them out on a single page, with language that we thought was crystal clear. And this is the result that we got.

(Laughter.)

MR. LAIBSON: Still worse than dart throwing. And we keep doing studies like this. Maybe we should give up. We keep thinking we are going to find a way to get people to do the right thing without basically holding their arm behind their back and dragging them across the room.

So, last slide, disclosure, in our experience, does not lead people to choose low fee mutual funds or at least has minimal effect. Even when the funds are index funds, even when they are identical commodity S&P 500 index funds. Would better disclosure work in the mortgage market? I think we have seen some preliminary evidence that suggests it is hard there, too.

What educational interventions work? I do not know. And the more I study these interventions, the more I find that it is very hard to change behavior in a dramatic way. I am particularly struck by the costs of these interventions, and the minimal results we get from them. Not to mention, if we think about more forceful

regulation, the costs to people who are actually truly hurt by the regulation, not just whose time was wasted, but whose choices were restricted.

So, the more I think about these issues, the more I am convinced, yes, there are people making mistakes, but the regulatory fix is not at all clear. And as we think about regulatory fixes, perhaps we should focus our energies in the short run on studying interventions and education and disclosure in controlled experiments, in the field perhaps, in cities, in states, who knows where, but some kind of controlled analysis before we get to national policymaking.

(Applause.)

MR. LEVIN: So, I am going to start by more or less picking up where David left off. And hopefully this will work well, because I am also going to transition somewhat into what some of the later speakers have to say, I think.

I think what you are going to hear a lot in this session is about the complexity of mortgage decisions and the fact that since people make them so few times, there is just much less experience for learning than in other financial decisions where they are repeated and there is a chance to learn from the experience and make better decisions the second or the third or the fifth or the 72nd

time around, as in the case of David's work on credit cards.

Some of my co-panelists have done some very nice work, which they are going to talk about later, showing that there is abundant evidence that borrowers in the mortgage market just do not fully understand their loan terms. And I think there are sort of two implications that we could draw from this. There are two separate kinds of things, in some sense, that we might think about. One is just a traditional problem that has been around for many years in the mortgage market, that people may pay high fees or not shop enough for a good APR. These are issues that have been around for many, many years in the mortgage market.

And then there are more recent issues which have to do with both the innovation in the kinds of mortgage contracts and the set of people entering into mortgage contracts. Basically, the problem, people may put themselves into the wrong kind of mortgage or simply put themselves into a mortgage or a house that they just probably should not have been in. And this problem seems particularly acute in the subprime population that was talked about in the first session today.

So, I want to use my time to talk about two particular issues. One is, I want to follow up on some of

the things that David said about the extent to which the market provides sufficient consumer information and sufficient guidance in terms of steering consumers into appropriate financial contracts. And then, secondly, to talk about the question of whether better information alone provides sufficient consumer protection, essentially, again, following up on one of David's themes, the extent to which better information leads to better decisions. And I think I am going to come up mostly in line with the first speaker, although not completely.

So, what do we know about disclosure incentives in markets? I think one thing we know at a broad level is it depends on two things. It depends on the sophistication of the buyers in the market and it depends on the degree of competition. In fact, one of the old results in information economics, one of the most surprising results that came out of information economics many years ago is that in a market with sophisticated buyers, highly sophisticated buyers, sellers actually have an incentive to fully disclose what they know.

Essentially, the argument is that, in a market where buyers are very sophisticated, the absence of disclosure, the absence of revealing information would be taken as bad news. People will read into the fact that you did not disclose something as the idea that you had

something to hide. And, of course that requires a tremendous amount of buyer sophistication to make that inference, that not hearing about something means that there is probably something that the seller or the lender wants to hide.

In a market where consumers are unsophisticated, the main thing that we know from information economics is that sellers will have an incentive to disclose only if there is a mutual gain from doing so. That is sort of one way of interpreting the kinds of models that David has been working on. There has to be a mutual gain for the seller to want to bring information forward. That is where competition, in some ways, can come in because in a setting where sellers are competing to offer lower fees or better APRs, one might think that there, in fact, would be reasonably good incentives. But what this requires is that the competition is effective in the sense that buyers are actually entertaining offers from multiple sellers.

And my impression is that that is something that happens much less in the mortgage market than many other markets that you might otherwise think. For example, if you were shopping now for a plasma TV and you had access to the internet, it would be very hard to dramatically overpay for your plasma TV because it is just so easy to type plasma TVs into Google and see 700 prices.

In fact, in some segments of the mortgage market, it is pretty easy to do that now just by typing into Google mortgage interest rates and getting your home area. But in certain sets of the market, for example, in the subprime market, where the offer terms are much more idiosyncratic and highly tailored to individuals, it is much harder to shop around. I think there is probably also some confusion on the part of buyers about the role that brokers play in fostering competition, and the extent to which their incentives are aligned with buyers.

The second point is these are issues over things like APRs or fees. In some ways, the more recent point has to do with whether buyers get steered into sustainable obligations, the mortgages that work for them. And in a traditional lending environment, one might have thought that the incentives were actually pretty good for this. If a lender is going to hold the loan on his books, you really do not want to put a borrower in a position where he cannot repay.

But in a vertically disintegrated lending environment, such as the current environment, your agency problems are going to undermine that sort of basic incentive to get people into sustainable obligations. I think there is still a question as to the extent to which that has happened, but that's certainly an important topic

for us to be looking at.

Let me talk for a minute about why this problem is particularly acute in the subprime market. I think in the subprime environment -- and here I am going to draw on some of my work that I have done not on mortgages but on auto loans. One of the issues in subprime is that -- actually, there are sort of two. One is that the population of subprime borrowers, at least from the research that I have done, is a highly heterogenous population. They are not all of the same kind. They are just very different people who find themselves in the position of applying for subprime loans. And they are also highly payment sensitive.

Let me just tell you a few things from some research that I have been doing recently with some of my colleagues at Stanford. This is on auto loans. So, why auto loans? Well, one of the things about looking at auto loans is that we have data from a major subprime auto lender. One thing that you can see in the data that we have is that you get to see consumers come on to the lot and get an offer and then make a decision. You see the application and then you see the purchase decision. I am not sure that this kind of data exists in the mortgage market. It would certainly be interesting if it did.

One of the things you can see is that the

decision to make a purchase, to close the deal after you have gotten an offer is just extraordinarily sensitive to down payment requirements. I mean extraordinarily sensitive to a degree that it would be hard to fathom for anyone in this room, given the sort of kinds of liquidity that most people in this room would have.

And purchasers are also remarkably insensitive to deferred payments to the extent that when you estimate demand and you put in deferred payments as an explanatory variable, you get a very precisely estimated zero as the effect of deferred payments.

The flip side of this coin that people are very sensitive to current payments means that though later payments do show up, they show up in default because when the later payments are due, then they are the current payments. And, so, you see remarkable sensitivity then to later payments down the road.

So, what that means is that you have just a population that can move very quickly in and out of loans depending on down payment requirements, and I think that is sort of one of the things that we saw this morning in the discussion by Chris and others, was exactly this finding for mortgages.

The other thing, and this follows up on something that Chris said this morning that we see in this

same data, has to do with what happens once people enter into a loan contract. This points to the difficulty of finding a sort of one size fits all solution for people in this category. Which is that what we see in our data is people enter into loans that have APRs of 30 percent per year. These are for auto loans. So, those are high APRs. These are at state caps.

Basically, there are two kinds of outcomes on a loan. One outcome is that people default on the loan and that happens, in the data that we have, to more than half of the borrowers. So, default rates are very high in this category of loans. But the other alternative is that people pay the loan and they prepay, and the reason they prepay is because once they start making payments, their credit score improves. And once their credit score improves, they are eligible for a better loan and, at that point, you do not want to be in a subprime product because why pay 30 percent if you can refinance to 18 percent or something lower.

And, so, in some instances what this points is the idea that people entering into subprime loans, some of them are going through a temporary bad patch. They take a high interest rate loan, but then they can get out of it, and others maybe should not have been in this loan at all. And I think that makes it very difficult to think about

what is the right piece of advice, for example, what is the right information to provide to these borrowers because much of it may be idiosyncratic to them and their own situation. It makes it hard to think about a one size fits all product or solution when a lot of the relevant information may be in the hands of the person taking the loan as opposed to the person making the loan.

So, this then leads to the last thing I wanted to comment on, which is about whether or not better information leads to better decisions. I did not know that David was going to put up those beautiful results from his Harvard studies, but I think those make the point better than I possibly could.

Let me start by saying, some of my other co-panelists, Jim Lacko and Jan Pappalardo, have done a wonderful study showing that improvements in the mandatory mortgage disclosure could lead to substantial gains in consumer understanding. That is, if you do surveys and you ask, do you understand this feature of your mortgage, what you see is that you could do much better than the current way that mortgage terms are disclosed.

And, so, that then leads to the question of, would that, in fact, improve decision-making? And I actually had a slightly more optimistic view than David when I looked at their study, which is that it suggests to

me that there are certain things where better information might help. For example, showing that some fees are optional fees, that you are sort of opting into as opposed to fees you have to pay strikes me as something where you possibly might get some traction. But it seems much less clear that better information, sort of per se, is going to allow people to be better shoppers.

One of the things to keep in mind you are shopping for mortgages is just remarkably complex even for a sophisticated buyer. If you think about the trade-offs between different kinds of mortgage products, whether you should take a fixed rate mortgage or an adjustable rate mortgage, how long to lock the rate or whether to pay points to reduce the interest rate, these are incredibly complicated decisions that certainly Ph.D. economists would struggle with and probably get wrong most of the time. I am sure I got it wrong when I took out my mortgage and bought my house in California at the peak of the bubble.

(Laughter.)

MR. LEVIN: One lesson I have drawn from behavioral economists, work by David and others, is that in thinking about things like disclosure, the details matter to an extraordinary degree. That it is just incredibly easy to go wrong and very hard to go right.

Because minute things that appear minute about details of the exact context in which information is presented, the timing in which it is presented, who it is presented by, and the tone of voice seem to matter in randomized experiments.

So, this just suggests to the extent that we were going to move forward, and I suspect we are going to move forward with disclosure and potentially with much more aggressive regulation of this market, but a lot of thought has to be given to the details of the way it is done, and it would be foolish to rush in too aggressively without giving a lot of care to the exact manner in which information regulation is advanced from here.

(Applause.)

MR. AMBROSE: Thank you for inviting me to come here today. I am going to talk about a related issue about banks advertising and how bank advertising can actually affect consumer choices in the mortgage market. This is joint work with Sumit. Our context is not actually first mortgages, but actually home equity lending and the home equity market.

And one of the things that is interesting about this is that we are looking at a group of consumers, these are not subprime, not Alt A, these are prime consumers, relatively sophisticated. One of the things that we are

able to observe is through an actual experiment that we identified at one particular financial institution is we could compare and contrast the choices that consumers make regarding types of home equity product, and how we classify the home equity product is into a variable rate product, a home equity line of credit, or a fixed rate home equity loan, and we can compare and contrast people who come into the bank, who essentially walk into the bank on their own, versus people who we then identified came into the bank and were sent a solicitation by this bank, and we can then see the choices that they made based on the type of characteristics of these borrowers.

So, with that in mind, I just want to kind of briefly show just some numbers that indicate, you know, obviously, advertising is extremely important, otherwise we would not spend so much money on this thing. The area that we are looking at is the direct mail solicitation. So, in 2005, we spent over $55 billion on this. Financial services was the fourth largest industry doing this. So, clearly, we get a lot of mail from banks and financial institutions.

So, the question that we were asking in this project was, does this advertising persuade consumers, does it impact consumers' financial decisions? This is actually fairly timely in that even up until last year,

the banks were ramping up their marketing efforts to go out and sell more home equity lines of credit and home equity loans.

So, with that in mind, the previous research in economics clearly indicates that marketing is effective. However, there is very little research in how consumers evaluate these marketing efforts on financial products, and, in particular, almost no evidence or research on mortgages. And, so, that is where we are coming up into the study.

I am going to skip over a lot of the details in the interest of time. Needless to say, there have been a few studies in the area of consumer advertising in showing that the advertising does impact decisions. And we are going to then focus again, as I have said, on the role of the home equity market, and our choice variable then is, do you take a variable or a fixed rate product?

Now, the competing views of advertising are essentially that advertising can be persuasive. That is the old style, old school view that advertisers are going to try to alter a consumer's taste preferences. A more recent view is that, no, advertising is actually much more informative. It is just providing information to consumers about lowering their search costs or that it is somehow complementing their taste preferences and helping

them encourage consumption. So, we are going to try to disentangle the three effects and show that actually advertising has all of these effects. We actually can identify particular consumers who were persuaded, who were informed, or who had a complementary effect.

What I think is an interesting aspect from the study is that we will actually be able to show that there were some consumers who got it right, there were some consumers who got it wrong, but the evidence is not clear-cut that everybody got it wrong. So, advertising is not an evil in and of itself. Clearly, there were people who got it right and the advertising helped them in that decision.

So, our study comes from a large financial institution who originated these products back in 2002. And, again, we have the two different types of lines of credit and home equity loans. We have over 108,000 observations. These are the loan applications. So, we identified that there were 108,000 walk-in consumers. These are the people that just came into the branch bank offices to originate a home equity credit.

We then matched this up with the bank's direct mail advertising campaign that they were conducting at the same time, and using the name matches we were able to identify precisely the consumers who received a

solicitation from the bank. So, almost 32,000 of these customers who we identified actually got a letter.

Now, during this time period, the bank mailed out over three million pieces of junk mail in waves. The way they identified people was that they went to the credit bureaus and they did a random draw of all consumers who had a credit score above 640. And then by law, they were required to mail out a solicitation to these consumers.

Now, clearly the bank is not doing a random mailing of product choices. They have some issues that they wanted to originate more lines of credit than home equity loans, so they were mailing out at a two-to-one rate. But there is no selection of the consumers to get one particular product or the other. That was completely random in that sense. So, there is no lines -- some consumers were being targeted for lines versus loans. That was completely random as long as they were in that two-to-one situation.

The response rate was very low, as you would expect. About 1 percent of the consumers responded to this offer, and that is consistent with the credit card market that we see in similar types of studies.

Now, what makes this interesting, though, is that the solicitation that you were sent obviously said,

please come in and originate a line of credit. But it also would say, other options are available. And it did not say you are preapproved. It did not say you are guaranteed anything. It just said these are available. So, it is very clear that this was not a you are guaranteed to get this line of credit.

And, unfortunately, we do not have the actual solicitations from the bank. They have been lost. So, I pulled up some letters that I received this past winter just to show you, and we have shown these to the bank officers, and these are indicative of the types of letters that were being sent out back in 2002. So, again, these are not the financial institutions that we are dealing with. These are not the letters that were sent out, but these are representative of the type of letter that was going out five years ago.

And, so, these are two letters that I received back in January. One is for a line of credit, one is for a home equity loan. And what I want to highlight is, on the top one, this was for the home equity loan and it clearly states in the letter, you could also get a home equity line. The bottom one was for the home equity line of credit and it clearly states that fixed rate options are available. So, this is the type of solicitation that you are getting. I am sure most of you have received this

type of mail as well and promptly trash it as well, like I do. But it is showing that there is a menu available, and we have also confirmed with the bank that when the customers came into the office to originate a product, they were shown the menu of products that are available. So, the choice was up to the consumer in that sense.

So, what we are going to do then is just a straight economic specification to look at what is the impact of this advertisement solicitation on the choice of the consumer. We are relating it back to the literature on mortgage choice. There is a large literature on mortgage choice that goes back to the 1980s, that looks at the effect of various interest rate and economic factors.

And, so, we are going to show that the walk-in consumers, as you would expect and consistent with all the prior empirical studies from the 1980s, do behave rationally. They choose products, as you would expect, from our theoretical models on interest rate environment and things like that. And then we are going to show that this advertising effect does trump the specifications that came out of the economic environment.

So, again, one of the interesting things about this data is we have everything that the bank had on the application. So, we can control for just about everything that the bank would have used in underwriting and,

hopefully, in terms of controlling for the consumer's choice variables. So, we have things about the economic environment. We know what the interest rates were at the time that they were applying. We know the loan-to-value ratios, both the first mortgage as well as the home equity loan.

Interestingly, and this is something that is very new, we actually know what the borrower intended to do with the funds because the bank asked the borrower, "Do you want to do this, go out and take a vacation, or use this for remodeling or debt refinancing?" Clearly, the borrowers do not have to use the funds for that purpose, but this is an indication of what they planned to do with the funds. Of course, we have all of the information on the application, about the borrower itself, their FICO scores, their income, age, job tenure and so on. So, it is a very rich data set in that sense.

I am going to skip over how we actually did this just in the interest of time. One of the issues that we are worried about, of course, is, well, what if the consumer's response is endogenous to this letter? So, we are very careful about that. There is a theoretical argument for why our study should be minimized because we are dealing with the home equity product rather than first mortgages. So, these people, there is a natural bias for

them to want to prefer a home equity loan. So, in a sense, our results are going to be biased downwards away from finding an effect.

Furthermore, we also econometrically control for this by estimating a bivariate probit model to try to control for the sample selection of borrowers' response to this advertisement.

So, just to jump to the advertisement effect, one of the things that I will go back and say, again, the financial variables, the interest rate environment variables, all loaded as we expected and were statistically significant. So, it is clear that the interest rates and the economic factors are driving the choice of product, of fixed versus variable rate loans. But what is very interesting is that this selection issue of the type of credit advertisement that you are getting is also highly significant. So, if you received a line of credit offer letter, you are 17 percent more likely to select a line of credit. If you received a loan offer solicitation, you are 14 percent more likely to take a loan. So, it was a very clear effect going on.

So, just to put this into perspective. These graphs are the predicted probabilities for a representative consumer coming out of our econometric model where we fed in the economic environment at the time

from 2003 through 2005. So, these are the time-varying probabilities of a representative consumer and what they would choose, the probability that they would choose a line of credit versus a loan.

So, the variability of the middle line, that is the walk-in consumers. You can see that the top line and the bottom line, these are the people that got the solicitation. There is almost no effect on the economic environment. So, the fact that they get a letter washes out completely the economic environment effect that we expect on their choice. You see the same thing for people who are refinancing. So, it is clear that the mortgage choice is being impacted by the economic environment, but then there is this overriding factor going on with the advertising campaign.

Now, in our paper, we have a slew of robustness checks because, obviously, we want to make sure that this is right. I do not have time to go through them all. One of the things that I will highlight is we were then able to go back and look at the people who got the solicitation and see who switched products, because these were clearly people that could not have been persuaded, right? If you got a line of credit offer and you switched and originated a loan, then clearly the advertisement did not persuade you to take out an incorrect product.

Well, lo and behold, the people who switch looked just like the walk-in customers in terms of our economic model. In fact, these are the people who, in terms of demographics, have higher credit scores, they have higher incomes, they are younger, and these are people who are using the product basically for remodeling purposes. There is some evidence that the people who are switching, they are different from the people who were not switching, who were following the cue from the bank solicitation.

We did, again, some more robustness tests to look at the comparisons between these walk-in customers and the people who received the solicitation. On this matched sample where we were able to control for all the characteristics of the borrowers, the solicitation variable comes in as being the most overriding choice factor. So, you are 44 percent more likely to select a line of credit if you received a line of credit letter than if you did not, controlling for everything else. So, again, this is a matched sample where we took the walk-in customers who did not receive any solicitation and matched them up with the solicitation people. So, this is washing out all of that effect and, clearly, the type of cue you got from the bank has a major impact.

Again, to speak to the idea, well, did these

consumers recognize that this was a mistake? Did they make a mistake? So, we were able to identify the people who were sent this solicitation, were persuaded, chose the product that they probably should not have chosen based on what all the walk-in people chose. And then we examined their three-month prepayment rate. Now, remember, these are home equity products, there is zero cost, there are no prepayment penalties, and lo and behold, the people that we identified as being persuaded have a prepayment rate, a three-month prepayment rate, a very short time period after origination, that is four times higher than the prepayment rate of the walk-in customers or the complemented customers.

So, there is evidence now that these consumers recognize that they made an incorrect choice, because it is a zero cost prepayment, they have presumably refinanced and switched off to a different product. Again, a number of different issues and robustness to verify that as well. One concern is maybe people just do not care that they were originating a product because, again, it is a zero cost product, so it does not really matter which choice they are making. We take the view that this is not correct because we examined the utilization rate of these lines of credit.

If it is true that the people would not care,

then we should observe the people who are making the incorrect choices, having a very low utilization rate. So, they are not paying interest costs, so it does not really matter. Well, that is not correct either. The utilization rate is consistent and is about the same magnitude as everybody else. So, they are paying a very high interest cost on a product that they probably should not have chosen relative to what everybody else chose. So, it is not a trivial decision.

So, the conclusion, then is that we do find that consumer choice is being driven by economic factors, just like in the literature from the 1980s. The intended use of funds that people have has a major impact on what they are going to choose, and then this advertisement, the direct mail solicitation, has a major impact on the choice of consumers.

Now, the takeaway then from this is, does this mean we need to eliminate advertisement? I do not think we want to go down that road because, remember, we showed that there was a large section of this group that made the right choice, got it right. So, they received the solicitation from the bank and they actually switched. So, it is not clear that just everybody who gets an advertisement is fooled by the bank, in some sense, to take a product that they should not have. They actually

chose the right product.

So, depending on your world view, you can view it as the glass is half full or the glass is half empty.

(Applause.)

MR. PAHL: Thank you. Karen Pence will be our next presenter.

MS. PENCE: Thanks very much. It is a pleasure to be here today. This really is an incredible group of speakers assembled, as you will see as I go through my presentation. I think I cite almost every single person who is on the panel this morning and this afternoon.

The usual disclaimer applies. These are not the views of the Board of Governors; they are just mine.

This is drawn from research with my colleague, Brian Bucks. I am going to gloss over a lot of details in this, so please ask me for the paper if you want the real details. We had this finding in our first iteration, that borrowers appear to understand their basic mortgage terms or they appear to either underestimate but not know the amount their interest rates can change. That is specific to ARM borrowers, obviously.

So, the part of this I am going to draw out a little bit more today is why. Why is it that borrowers seem not to know, as the reasons why borrowers do not know might inform our policy choices.

So, first, just to illustrate the first point, that borrowers do know basic mortgage terms. So, this is a distribution. It is from two different lender data sets and one borrower data set. So, just to be clear, we are not matching a borrower and a lender, we are just looking at the overall distribution. But if you look at it, these align pretty well on basic terms. So, all three data sources agree about 85 percent are mortgages -- and I should be clear, this is in 2001. That was the best year we could get most comparable data. So, about 85 percent of mortgages in that year were fixed rate, and 11 to 13 percent were ARMs.

And if you look at the amortization period or how long they took the mortgage out for, they all agreed, about a quarter are 15-year mortgages, about 70 percent are 30-year mortgages.

You get a very different picture when you go into the terms that are specific to an ARM. This is the cap on how much your interest rate can change per period. Again, remember, this is 2001. It was a very different world. We did not have all the products that Souphala and Anthony detailed for us earlier. So, pretty much you had a standard ARM where your interest rate could go up two percentage points each period. And that is what the lenders described. So, they said about half of the ARMs

outstanding in 2001, the most the interest rate could rise every year was two percentage points. There were some that could rise by more and then almost 20 percent that had no cap.

Well, borrowers were wildly more optimistic about how much interest rate risk they were taking on. So, 40 percent of borrowers thought their interest rate could only rise by one percentage point. As you go down the distribution, all the higher categories, they really do not think these more risky categories apply to them. They think they have a pretty low risk mortgage.

We can also look at the share of borrowers who were asked in the survey, do you just know these terms? They really do not. What I showed you before was a tabulation of people who thought they knew what their terms were, and these are the other people who admitted they just did not know. So, 35 percent said I do not know how much it can rise every period. Forty-one percent said I have no idea what is the most it can ever go to. Twenty-eight percent said they did not know the index.

My favorite joke at this point, a lot of these people actually thought their mortgage was directly tied to the Fed Funds Rate, which is either exciting or scary for a Federal Reserve employee.

(Laughter.)

MS. PENCE: So, three different possibilities. In the first one Brent just talked on a minute ago, the benefit of acquiring the knowledge is small. So, maybe people do not know because it does not matter. So, my colleagues say to me, for example, I do not know what the interest rate is on my credit card, but I always pay off my balance every month, it does not matter. And that is a common framework that people look at. They say, well, it does not matter, so why do I need to figure it out? So, maybe the borrowers do not know because they know it is not going to have a big financial effect on them.

There is a very nice paper that Sumit and Souphala have looking at correct card contracts and saying that as a financial penalty grows for choosing the wrong contract, people are more likely to choose the right contract. So, we take that as evidence. So, when the costs are high enough, people acquire the information. But when the costs are small, I mean, we all have a finite amount of time every day.

I did not see evidence for this "it doesn't matter" hypothesis in this paper. This left-hand graph is a simulation we ran. I will spare you the details, but we said, what is going to happen to these people if they get a really big interest rate shock? So, we calculated the change in their payments relative to their income, and

this is the 90th percentile. So, what that means is that ten percent of the ARM borrowers that were in the bottom half of the income distribution were going to have a payment shock of 13 percent or more of their income. So, under a scenario, that is how much their payment was going to go up for ten percent of them, 13 percent or more.

If you look at people in the top half of the income distribution, and they are much less of a problem, so ten percent of them are going to have a shock of six percent or more. So, they have much less exposure to bad shocks. If you just looked at that and if you thought the people do not know because it does not matter, you would expect low income borrowers to know these terms a lot more because they are going to face a big penalty and we do not see that at all. So, 41 percent of ARM borrowers in the bottom half of the distribution said they did not know their per period cap compared to 25 percent in the top half.

The exact same thing, if you look at people who took out their mortgages recently. These are people that took out their mortgage in the year of the survey or the previous year, and it is kind of not surprising, if you have taken out your mortgage recently, you have a lot more interest payments coming and, so, you get a much bigger shock. So, again, the numbers are almost exactly the

same. So, ten percent of them are going to have a shock of 13 percent or more of their income. That is the change. It is not the payment. It is the change in the payment.

If you took out your mortgage earlier, much smaller. Seven percent is the amount of the shock that the top ten percent are going to get. And, again, this does not line up well with the do not know rates. So, the people who do not know are actually the people that took out their mortgages recently, not the people who took it a while ago.

So, another possibility, understanding mortgage terms is difficult. As people have already said these can be very complicated contracts. And there is quite a lot of literature demonstrating that different groups have more difficulty understanding these contracts either because of cognitive problems or financial literacy. Groups that are often mentioned are those with less income and education, and so Jeanne Hogarth has done a lot of work in this, Annamaria Lusardi has done a lot of work in this area.

Again, this is kind of the Sumit Agarwal presentation, but he has a very nice paper with John Driscoll and with David Laibson, looking at older people and saying that older people seem to make financial

mistakes a lot more.

There is also another strand of literature saying people really have problems with interest rates. Again, Anna has done some work in this. But people seem to have much more trouble with compound interest rates and other financial terms.

Here we do find support for this theory. So, if you look at people that went to college versus people that did not, the people who went to college are a lot less likely to say they do not know. So, 25 percent of these people say they do not know compared to 41 percent of people that did not finish college. We are able actually to replicate the age result, although actually much more dramatically than David and Sumit and John found in their paper. So, borrowers over 65, actually 60 percent of them did not know their per period caps, and I originally thought there was nobody over 65 that has an ARM, but it turns out that is not true in the data. So, so much for that theory.

Also, the interviewer in this survey wrote down, "Did the borrower have a hard time understanding the survey?" The people who had a hard time understanding the survey were much more likely to say they did not know.

And, finally, a result that came up over and over again, I was not quite sure where to place it, but I

finally decided it was a financial literacy thing. So, people that are not willing to take any risk at all in their investments, like nothing. There are questions and they are like, "Well, I am willing to take a little risk," but these are the people that say no risk at all. These are actually the people, sadly enough, that are taking on the most risk because they do not understand their contracts.

A third possibility that Jonathan alluded to earlier, borrowers may be not focused on the long-term financial consequences. They may just be focused on what is my monthly payment going to be right now. It may be because borrowers are impatient by nature. This is what economists would call a preference parameter. Or it may just be they are in a situation, they really need money, they are borrowing constrained, they do not have very good options, they just need to get a loan as soon as possible and they are not thinking about the terms of the mortgage, per se. They are thinking about how to get out of the contract and into a better situation.

And there are some very interesting focus groups of subprime borrowers, including the work that Jan and Jim are going to talk about in a minute, where a lot of subprime borrowers, in particular, report feeling desperate and powerless when they enter into transactions.

They are not really in a position where they are in a position to argue with the lending institution.

I interpret our evidence as consistent with this hypothesis also. So, people who said I did not apply for a loan because I thought I might be turned down, 46 percent of those people did not know their caps compared to 36 percent of those who said, no, I have never had that. The same thing, people that did not have any informal borrowing options, so people who said I cannot borrow $3,000 in an emergency from family or friends. So, 48 percent of these people said, no, I do not know my interest rate caps.

On the people who said they are just focusing on the short-term in their planning and savings decisions, those people are much more likely not to know. And this last one, it was not clear to me if this was a financial literacy or a desperation, I think you could make either argument. But people who do not do any comparison shopping when shopping for loans do not know, which maybe is not a surprise.

To conclude, of the three explanations that we suggested, financial literacy and short-time horizon seem to be the main reasons why ARM borrowers do not know their interest caps. We do not find a lot of support for the "it does not matter" explanation. So, I think this is

kind of a "good news, bad news," from the perspective of the conference. Inasmuch as financial literacy is the problem, maybe there is a hope through disclosure that you can improve borrower understanding. But if you have borrowers that are just not thinking in that paradigm at all, it is hard to see how disclosure is going to be a big help. Thanks.

(Applause.)

MR. PAHL: Thank you. Next, we will hear from Jan Pappalardo.

MS. PAPPALARDO: This is one of those times where you feel like everybody else knows much more about this than I do. So, I am delighted to be part of this today and delighted that so many of you came to present. I have learned so much already, it is wonderful.

In the interest of time, I will just maybe go ahead with some of the intro stuff. I do not think you will miss the slides. Jim and I have been doing work on mortgage disclosures. The study that we are going to talk about is available online, and we had some copies out earlier. I think they are gone already, but maybe we can get some more.

(Brief pause.)

MS. PAPPALARDO: I will give the introductory comment because you do not need to see anything. I came

to the area of looking at mortgage disclosures, oh, several years ago. There is a long history of mortgage disclosure requirements going back to things like the Truth-in-Lending Act back in 1968 and the Real Estate Settlement Procedures Act, which requires the GFE and in TILA, it is the Truth-in-Lending statement, and some history of concern about the effectiveness of disclosures. In addition, one thing that interests us about disclosures is that we have seen, in FTC cases, that consumers can receive every required disclosure and still be deceived. So, that leaves open a question of how well do disclosures work.

A few years ago, I was asked to look at some regulations, and I went to do a review of literature on what we knew about mortgage disclosures. I was actually shocked to find that there was basically no research on mortgage disclosures. So, we at the FTC, having done disclosure research in other areas, decided to do some of our own work. This particular study, we tried to focus on understanding how consumers understand current disclosures because, as I said, we had seen in cases that people must not understand them. We were looking at mortgage terms and whether people understood the terms of their own mortgages, and we found that there is virtually no evidence on whether better disclosures could actually

improve consumer understanding, despite the fact that we had years of disclosures and many people thinking disclosures must work. We have them. Smart people write them. They must be effective.

The objective in our study was to learn about how consumers search for mortgages, how well they understand the current mortgages in terms of the recently obtained mortgages, and whether it is possible to develop better disclosures.

We did a two-part study, and it was a combination of qualitative and quantitative research. The first part was a series of in-depth interviews where we tried to get a detailed picture of real consumer experiences, where consumers used their own mortgage forms from real mortgage transactions to try to assess the accuracy of their knowledge of their own loans. In addition, we did quantitative consumer testing to test the actual performance with disclosures in a controlled, experimental environment.

So, I will tell you more about the consumer interviews. The interviews proved to be really, really interesting. It was very, very hard to find consumers to participate in the study, but what they offered was an in-depth picture of what people really know or do not know about their mortgages.

We conducted 36 interviews, about an hour each, all in Montgomery County, Maryland. If there is a bias there, you would think that that was a bias of a highly educated population. So, we knew ahead of time that if people were confused that it was likely to underestimate a more general problem in the more general population. Everyone has obtained a mortgage within the previous four months. Approximately half of the people were prime, half subprime. And most interviews included a review of loan documents from the consumer's own recent mortgage.

It was very interesting to watch the procedure unfold. Typically, respondents came into the interview being very happy with their mortgage experience. They were not typically a sample of complainers. Because you might think, well, who would participate in one of these studies? Well, people who have some complaints. There were a few. But, mostly, they thought they had a really good transaction. Things went well. Their lender treated them well. Their broker treated them well.

But as they were asked more specific questions and detailed questions about the transaction, the respondents' attitudes actually noticeably deteriorated, as they began to recall problems that they had not thought about before or they realized that those numbers on those papers that they thought they understood, were no longer

so clear to them.

We also found, as mentioned earlier, that many of the subprime respondents really seemed to be experiencing financial difficulties. Oftentimes, really quite hardships had come upon them. So, we took that to indicate that when we looked at subprime people based on the HUD list, that it seemed that the people we had identified as being subprime situations oftentimes indeed did have financial difficulties.

Most of the respondents appeared to understand the general type of mortgage that they obtained, and some had clearly matched a loan type to their circumstances. I think we heard earlier today that people are different. Some people have good shopping skills. Some people do not have good shopping skills. Some people clearly thought about getting an adjustable rate mortgage for reasons that you would think somebody would want to get an adjustable rate mortgage. But many were unaware or did not understand or misunderstood, misunderstood key costs or features of their loans, including many things that are prominently disclosed.

People misunderstood the payment of up-front points and fees, lack of escrow for taxes and insurance, whether there was a large balloon payment, adjustable interest rates, prepayment penalties, understanding of

recent mortgages. Misunderstanding was apparent among both people with prime mortgages and subprime mortgages; people who were very highly educated; both those who had done very extensive comparison shopping, and those who had not done any. And, in fact, I can recall one person who talked about the little chart that they prepared so that they could compare the mortgage options, and this particular person had some very serious misunderstandings.

We also found that many respondents had not been able to understand the disclosures on their own, but relied on their loan originator to explain them. Many were confused by various fees itemized on the GFE form and did not understand how they differed. Few understood the annual percentage rate, one of the hallmark metrics of consumer disclosures. Many believed it to be the interest rate. A number were confused by the prepayment penalty disclosures.

And the most shocking and saddest finding, I think, is that, in some respects, the disclosures were actually worse than ineffective, and they actually seemed to create consumer misunderstandings. For example, many people believed that the amount financed disclosed in the title statement was their own amount rather than the loan amount minus prepaid finance charges. Many believed that the discount fee disclosed in the GFE was a discount that

they had received rather than a fee. Is it a discount? Is it a fee?

The reaction to the prototype disclosures that we showed to people in the interviews was overwhelmingly positive. They viewed them as a significant improvement over the current forms. Now, Jim will talk about the quantitative testing that we did.

MR. LACKO: I just want to summarize what we did. We found in the second part of the study, in which we tested consumer understanding of current and prototype disclosures using quantitative tests in an experimental setting, with a sample of over 800 recent mortgage customers, half prime, half subprime, just like the first part.

The current forms we tested consisted of the truth-in-lending statement and the good faith estimate of settlement costs, which if you've gotten a mortgage yourself, those are the two primary federal disclosures for mortgage costs. We also developed some prototype disclosures for the study ourselves in which we just tried to step back and imagine that the current disclosure requirements did not exist and just start from scratch and think about what information consumers need most when they are shopping for a mortgage and the best way to present that.

In our prototype, we focused on disclosures for fixed rate loans with the idea that that was the simpler case to try to look at first. It could later be extended to include, if successful, extended to include adjustable rate features. And we came up with a prototype disclosure form that consisted of a one-page summary of the key costs and features of the mortgage loan and then two additional pages of further details.

And I think the handouts have copies of our prototype in the back, is that correct? It is hard to see it on the little slide. But if you want to look at that, the first page summarizes all the charges the lender is charging on the loan and then how that translates into consumer payments and also any penalties and other fees on the loan. Whereas the second page of the prototype provided additional details on what was included in the loan amount and any optional charges and the monthly payments and cash at closing. The third page detailed the settlement charges.

In our testing procedure, what we did was we gave our participants copies of disclosure forms for two hypothetical mortgage loans and asked them to examine the forms like they would have if they were shopping for a loan, and then asked them a series of about 20 to 25 questions dealing with about a dozen different loan terms

on the forms. So, they were able to keep the forms and examine them throughout the questioning.

We gave half our sample the current disclosure forms, half the prototype forms, and then we were able to compare the two groups. Then we also split each of those samples with a simple loan and a more complex loan with more complex features, such as balloon payments, interest-only payments, optional charges.

Our results clearly showed that the current disclosure forms fail to convey key costs to many consumers and that the prototype that we developed for the study yielded significant improvements. There is one slide here, number 25, it shows our basic results, which is if you look at the results of the 20 to 25 questions, depending on whether it was the simple or complex loan scenario, respondents using the current forms were able to answer only 61 percent of those questions correctly. We asked people things like, "what is the interest rate on loan X," "which loan has the lowest APR," "is there a balloon payment," and so forth. Respondents using the prototype form were able to answer 80 percent correctly, an increase of nearly 20 percentage points.

We had similar results for both simple and complex loans. Consumers did a little better on the simpler loans, but the prototype provided benefits on

both.

The next slide shows a little more dramatically the difference between the two, the current and the prototype disclosures. It looks at what percentage of the respondents were able to answer 70 percent or more of the questions correctly. Only 30 percent of the participants using the current yield forms were able to do that, whereas 80 percent using the prototype forms were able to do so.

While we found pretty large differences between the current and prototype form performance, we found only very small differences between the performance of prime and subprime borrowers. The next slide shows only a couple of percentage points difference between how well prime and subprime borrowers performed on the questions, which was kind of a surprise to us.

The next couple of slides show some of the individual results from some of the questions. The failure to convey key loan costs was evident across a wide variety of loan terms. For example, using the current forms, 87 percent of the participants were unable to correctly identify the total amount of up-front charges on loan. Seventy-four percent did not recognize that there were optional charges for credit insurance. Half could not even correctly identify the loan amount. A third

could not identify the interest rate. Again, this is while they had the forms in front of them and were free to continue to look through them.

Let's skip down a couple of slides. The improvements from the prototype form were also evident across a wide variety of different loan terms. For example, there was a 66 percentage point increase in correct identification of the total amount of up-front charges, 43 percentage point increase in correctly recognizing that there was optional credit insurance on the loan.

So, our findings, just to summarize the findings of the quantitative study, which is consistent with the in-depth interviews that we did, was that the current forms clearly fail to convey key loan costs to many consumers in both the prime and subprime markets, and they also -- a number of the disclosures also seem to affirmatively create misunderstandings, consumer misunderstandings. But we also found that it seems to be clearly possible to do a lot better than is being done now, that better disclosures could be developed, and that better disclosures would provide benefits for both prime and subprime borrowers.

I am just going to hand it back over to Jan for the closing.

MS. PAPPALARDO: Now, I realize since you did not see our slides that perhaps I should say very clearly that we speak for ourselves and not for the Federal Trade Commission or anybody else who really matters.

So what does this mean? What do we think this means? Well, we think that the ineffectiveness of the current federally required disclosures is likely to have contributed, at least somewhat, to the current problems in the mortgage market. Although after listening to some of the findings today you have to think how much, but I think probably likely somewhat.

The study results show that the current disclosures are not effective, even for the plain vanilla fixed rate loans that we tested. And findings would likely have been worse for ARM loans, particularly the more complex types marketed over the last few years. We do not mean to imply that all consumers misunderstood their loans or that ineffective disclosures are the primary cause of problems in the mortgage market. But the results do suggest that it is likely that many consumers did not know what they were getting into and that this lack of understanding made current problems worse.

Some of the loan terms currently of concern and being addressed by new regulatory restrictions are terms that current disclosures were particularly ineffective in

conveying to consumers or failed to address at all. For example, the prepayment penalty disclosure is a problem. You could see that even in the interviews where people looked at their own disclosures, reading the language that is allowed under the law, they could not figure out if they had a prepayment penalty. This is also borne out in the quantitative research. There is no requirement to make clear what the role is of escrow for taxes and insurance. So, this is not always clear to consumers. Or trying to figure out what the total monthly outlay is going to be. If you think taxes and escrow are included and it is not, you are in for a nasty surprise.

Balloon payment disclosures were clearly a problem and something that needs to be worked on.

It seems to us that there surely is a need for comprehensive disclosure reform. Consumers deserve a single comprehensive mortgage disclosure document that will consolidate information on the key costs and features of their loans, use a simple, easy-to-read language, is presented in easy-to-read form, and is provided for all loans, both prime and subprime. Simply adding more disclosures to the stack of disclosures that people already receive is not likely to be effective.

So, what does it take to develop new disclosures that will work as intended? One thing we know is that

good intentions are not enough. People have had good intentions in the past and we have seen that they have failed. Disclosures that make sense to well-intentioned bureaucrats often bewilder real consumers.

We think that the answer is testing. Marketers routinely test new advertising messages, but policymakers often fail to take similar precautions. Designing disclosures is tricky. More information is not always better. Simply adding more disclosures may not help at all. Disclosures must be carefully crafted to ensure that they will work as intended. New mortgage disclosures should not be implemented unless consumer testing demonstrates that they are better than those currently required and that they truly inform rather than confuse borrowers.

And for policymakers, we are concerned that a rush to mandate hastily-drafted new disclosures risks will only substitute one set of ineffective disclosures for another. Our slides will be available online. Thank you.

(Applause.)

MR. PAHL: Thank you, Jan and Jim. If the presenters could come up to the table, I think we have time for a few questions. I would ask everyone if you could try to keep them as brief as possible given the time constraints. And if you hold your hand up, someone should

come around with a microphone.

MR. KLEINER: Morris Kleiner, University of Minnesota. Question for David. One of your co-authors, Brigitte Madrian, has done work on the power of suggestion. I wanted to know if you thought giving a list of reasonable alternatives for a loan might matter. For example, this was done in Medicare pharmaceutical payments, that there was a list of three or four suggested plans that might be the best.

MR. LAIBSON: So, I am a big fan of defaults or suggested choices. And I certainly think that it would potentially work here as well. The challenge is figuring out who sets the default or who makes the recommendation.

The defaults are working so beautifully in the savings domain now because there is a natural agent who is assigned to make that choice, and that is the plan sponsor and the plan sponsor representatives. So, there is a fiduciary obligation on the plan sponsor.

The government is not setting the default in the savings domain. If the government were to set a default or to set a kind of recommended template in the mortgage domain, we would need to create a firewall around the entity that was doing that. Much like perhaps the Fed is mostly an independent body, this mortgage regulator might also be, or maybe it would be the Fed, who knows, or maybe

it would be the FTC. But I think the reason that some of us are hesitant to make that recommendation is that the political economy issues look so challenging.

MR. PAHL: Other questions?

MR. LONG: My name is Mike long and I work for a research and consulting company called Macro International, and we help government agencies develop and test new disclosures. So, I definitely agree with Dr. Pappalardo that more of that needs to be done.

(Laughter.)

MR. LONG: My question was for anybody on the panel, was whether you had done any research or seen any research on the extent to which improved disclosures can improve the speed with which people make decisions. So, getting back to some of the research that David or Dr. Laibson --

MR. LAIBSON: David.

MR. LONG: David talked about, even if the decisions that people make do not necessarily get any better, if they could make those decisions much faster because of improved disclosures that could also be seen as a benefit.

MR. LAIBSON: We do not have any data on time to decision. In other work, we do have data that shows that when people are torn they take a long time to make a

decision, which is not a surprising result.

So, I guess one of the striking features of this market, and of all of these different household finance decisions, is how little time people invest in these activities. So, when we survey people and ask them, "How long did you take to enroll in your 401(k) plan, to make the decision about asset allocation, to figure out what your savings rate would be? This is one of the top decisions of your life, right? Retirement savings?" They tell us 45 minutes.

So, yeah, we can introduce a default and take 45 minutes down to three minutes or zero minutes. I wonder whether the social gains are very large given how little time is invested to begin with.

MR. LACKO: Yeah, I agree with David. I think for a lot of people, you may want to even increase the amount of time they are spending. They are taking too little time, not shopping at all and comparing alternatives at all.

(Off microphone.)

UNIDENTIFIED MALE: The time between application and closing has shortened a lot in the last 20 years. But that (inaudible).

MR. PAHL: Let's take one more question before we break for lunch. Does anyone have a question?

(No response.)

MR. PAHL: Lunch must be very a popular option. I only have one more person.

MR. BERENSTEIN: I am Matias Berenstein from the FTC. This is a question I guess for David Laibson. In the experiments that you cited in your presentation, can you give us some more intuition as to why you found no effect of the improved disclosures? What was driving the initial decisions on making that and why was that not effective?

MR. LAIBSON: Well, it is not that we find no effect. We find, in some cases, no effect and, in some cases, small effects. My developing understanding of all of this is that people have a lot of mixed, sometimes correct, sometimes incorrect, models of the world. And if you feed information into those models, even if the information that is being shared with them is, in some sense, crystal clear, they may process the information inappropriately and end up with the wrong answer.

So, for example, look at index funds. We asked our subjects to allocate money across four index funds. Some of our subjects are actually Wharton MBA students. I did not show you that data. They say all sorts of remarkable things like I wanted to diversify my investments across these four S&P index funds, or they go

with a brand name even though there is no brand relationship here. That is commodity good that we are talking about.

So, even when information is crystal clear, sometimes the interpretation of that information and the inferences that are drawn from that information about what the appropriate product is, end up being very, very bizarre. And I think the challenge is both to give them information that is comprehensible and to facilitate the use of that information, so that the final decision, meaning the product choice, is, in some sense, optimal or near optimal.

MR. PAHL: Thank you very much. Thanks to all the members of our panel for their fine presentations.

(Applause.)

MR. PAHL: Chairman Kovacic will be starting off the afternoon program at 1:00. So, if folks could be back in time for that, we would appreciate it. Thank you.

WELCOMING REMARKS FOR THE AFTERNOON SESSION

MS. IPPOLITO: If we could get started so we can try to get back on schedule here. I am very pleased to present to you the Chairman of the Federal Trade Commission who will just say a few words to get us started for the afternoon. Chairman Kovacic.

(Applause.)

CHAIRMAN KOVACIC: Thank you very much, Pauline. And I want to add my own welcome to those of you who have come to attend this event which is really one in a long line of items that is truly a signature program of this agency.

I would like to briefly introduce the agenda for the afternoon, but then also to tell you a bit about how this program fits into the larger framework of activities that we have pursued related to mortgage lending and information issues associated with that sector.

We are going to start this afternoon with a panel that looks at the relationship between consumer information and the mortgage market crisis and, among other things, to consider how information policies may have contributed to the crisis and to explore possible solutions to problems that have been identified.

We will then be turning to a roundtable that will look at the question of the adequacy and informative

nature of disclosures, to consider the extent to which consumers can actually absorb disclosures that are mandated by law, to consider what types of information individuals need in order to make effective decisions in financial services transactions, and to explore larger questions associated with how we go about using consumer research and other analytical tools to design disclosure instruments that indeed serve the purpose of putting consumers in a better position to make wise and effective choices that satisfy their needs.

This agenda and the entire program that we are pursuing today fits into a larger philosophy about how the agency ought to go about approaching policy questions in this and related fields. One of the most important qualities of the agency, a role that it has embraced in its modern era that goes back roughly 40 years or so, is to use a collection of policy instruments to address questions of this type.

We are, in part, a law enforcement agency and we have brought, as you have heard today, cases in this field. But that is only one policy instrument by which we seek to effectuate needed changes in the public policy arena. Quite significantly, we have relied heavily on a significant research capacity and you have heard earlier today about the work that James Lacko and Jan Pappalardo

have done in seeking to develop an empirical foundation for assessing the extent to which individuals can absorb the information that is mandated in disclosures under federal law or other public policy commands.

But one of the most important things we have sought to do is to deal with a criticism that is often leveled against public authorities, which is they look in the rearview mirror at phenomena while the world goes surging past. And we have taken that lesson to heart by relying, to a greater and greater degree, on public consultations to make us wiser, to convene the outstanding collection of officials present here today, academics, private industry participants, commentators from a variety of areas and from other public governing institutions with the aim of providing a better foundation for us to make judgments.

These types of consultations only work, we have discovered, if you have a Cooperstown quality line-up assembled to provide guidance and, fortunately, in the hall of fame of financial transactions and related information about the mortgage lending and related sectors, we have exactly that gallery of performers here today.

And I want to express, in particular, my gratitude for all of them for spending the time that they

have not simply by their physical appearance but with the enormous enthusiasm and creativity that they have exhibited in putting together materials that will make this a rich enterprise, not simply for today but in the longer term as others read the transcript and consult these materials and, indeed, most directly in the quality of our own work over time.

This event helps bring together the true synthesis of capabilities that are designed to make this institution, the FTC, a great one. Research, enforcement, public consultations and guidelines, a genuine synthesis of what we know, both from our law enforcement role and guidance efforts as well as the research work of our Bureau of Economics, have all played such a critical role in putting this program together.

Once again, with the greatest possible gratitude, I thank all of our participants for throwing themselves so successfully and enthusiastically into this effort to improve going ahead the quality of the work we do. Thank you again and thank you, Pauline.

(Applause.)

SESSION III: ROUNDTABLE EXAMINING THE IMPACT OF CONSUMER INFORMATION ON THE MORTGAGE MARKET CRISIS

MS. IPPOLITO: Okay. Well, we are trying to get back on schedule, so let me do this quickly. We have a wonderful panel here today. Our first speaker will be Paul Willen from the Federal Reserve Bank of Boston who has done quite a bit of empirical work on foreclosures. So, that is an important part of our discussion today.

We have also invited Alex Pollock, who will be our third speaker, partly because he has his mortgage disclosure, he is out there and he is trying to convince us all it is a good choice. So, we wanted to hear directly from him what he put on his disclosure, how he thinks about it, why he thinks those were good choices, what went into his thought process as he constructed that disclosure.

And then we have invited two people who, I am going to overstate this, but know nothing about mortgages.

(Laughter.)

MS. IPPOLITO: Other than their own, we hope. But what they know a great deal about is how consumers make decisions, how consumers process information, how they think about risky choices, inter-temporal choices, and they bring knowledge from a broad variety of other fields that have these kind of issues in them and we asked

them to bring that knowledge to the mortgage issue and to talk about that.

So, if we can get started, Paul.

MR. WILLEN: I would like to thank the organizers for inviting me. This title, Would More Disclosure of Loan Terms Help, I thought, at this point, I would be more controversial. But given Chris' presentation already, some of what I am going to say is a little redundant. There are a few familiar faces who have seen parts of this presentation before, and I apologize that you are seeing it again.

We have already heard this, but remember that the views today expressed are mine. This is important now because, in the past, I have done research and not even I really cared, but people do care about this, and I am speaking entirely for myself. I am not speaking for Eric Rosengren, the President of the Boston Fed or for that man, who you recognize I take it, and when I say "we," I do not mean Ben and me.

(Laughter.)

MR. WILLEN: Okay. The other thing, unlike Ben and the rest of the Federal Reserve Board, I actually am often wrong. And, so, everything I am about to say could be wrong and I am going to give you an example of that in just a minute about how we have been wrong, and I mean

that in the best possible way, which is that I think anybody who has worked in this area knows that you can look at some data or look at some analysis and think this is crystal clear, this is absolutely right, this explains everything. And then a few weeks or days or even a few minutes later, you realize you were completely wrong.

So, let me just give you an overview of what I am going to say today. I am going to play the devil's advocate a little but not so much now that you have already heard Chris, and I am going to make the argument that the complex alternative mortgages only played a supporting role in the current crisis, even the role of ARMs is overrated, resets are a small part of the program, and I am going to hammer away at our main theme which has been that house prices are the key to why we are having a crisis right now.

And the policy conclusion that one draws from that is that more or better disclosure about the mortgage itself would not have helped that much because it is not the mortgages that are the problem, it is the house prices. And I will get to more detail about that in just a second.

In terms of households making the right decision they needed not just an understanding of the mortgage itself, but a broader understanding of the risks of home

ownership including house prices and, in particular, house prices. That is what households needed. So, we need what I will argue is a more comprehensive measure of the risks of home ownership, as I say, above and beyond just the mortgage itself.

And I am going to argue at the very end that even having that kind of -- and this sort of fits with what David Laibson said -- that even giving people this information may not be enough. I think one can make a plausible case that we need to have a heavier hand, and we need some sort of requirement to prevent people who want to do crazy things from doing them.

So, I actually had, when I was making this up fortunately last night I had a bunch of slides, many of which Chris covered. It is a presentation I have given many times. And I realized I was not going to have time to cover them all, so I have fortunately selected one thing that Chris did not talk about. So, I am going to talk just now about past due rates, and this is an example of how we got something wrong at the Federal Reserve. We now think we have it right.

And it is a fact that I think -- I argued that no single picture has caused more bad public policy than this one, and one of my colleagues, this is economics humor here, said no, there is the Phillips curve.

(Laughter.)

MR. WILLEN: So, this picture shows delinquencies on subprime ARMs, and this is a picture you have seen and there are some figures I have not updated because I am too disorganized or lazy or something. But this one I deliberately did not update because it is important. This goes through the middle of 2007.

In the middle of 2007, when this crisis first started to get on everybody's radar screen, everybody looked at this picture, data from the Mortgage Bankers Association, and what it shows is rising delinquencies of subprime ARMs. So, what people did was they then looked and said, what is happening to subprime fixed rate mortgages. And you compare the two lines, and the conclusion all kinds of people, including us, came to was that the problem was an ARM problem because the subprime fixed rates, the phrase was, "were within historical norms." The delinquency rates really had not gone up that much on subprime fixed. The problem was all with the ARMs.

And the problem here, what we only realized subsequently, was that you have to be very, very careful when you are using this data, and the reason is that what are we looking at here -- what we are looking at is the percentage of loans past due and that is the ratio of

loans past due to the total loans in that category.

So, what could make this number go up? Well, the way we were analyzing it, we were assuming that the problem was changes in the numerator. If the numerator goes up and the denominator stays the same, this number will go up. But the other way in which this number could go up is if the numerator stays the same and the denominator goes down.

So, the problem here, and you can actually think about it in a very -- I mean, there is a simple example that illustrates how serious a problem this is. Suppose we have a current borrower, in other words, the borrower is current in his payments, his loan is not past due and he has a subprime ARM. Suppose that he refinances that into a subprime fixed rate mortgage. So, we are not having any changes in the numerator here. The delinquencies are staying exactly the same.

But what is going to happen to the measured level of delinquencies, the measured delinquency rate, the percentage of loans past due? Well, when the borrower leaves the category subprime ARM, the total loans in subprime ARMs go down. That means the delinquency rate in subprime ARMs is going to go up and he is going to refinance into a subprime fixed. That is going to mean the total loans in the subprime fixed category is going to

go up, loans past due stays the same, and that means the delinquency rate on subprime fixed rate mortgages is going to go down.

So, even though nothing has changed here, there is no actual change in delinquencies among ARM or fixed rate borrowers; it is going to appear as if subprime fixed got better and subprime ARM got worse. So, when we go to the data and you actually look at what happened to the total number of loans, this is more or less what you see. Which is we saw, in this middle of 2007, a part of what was driving this in the end, ironically, was some messy reclassification issues with the Mortgage Bankers Association.

But the point here you see is that the number of ARMs is going down, and the number of fixed rate mortgages is going up. So, there is a sort of band-aid solution to this, which is rather than look at the rate, just look at the level. So, if you look at the level of delinquency of subprime ARMs, which is to say the number of subprime ARMs that were delinquent, and you look at the number of subprime fixed that were delinquent, you see that in 2007, the idea that the problems were confined to the ARMs was wrong. Both of these were rising at exactly the same rate. In fact, the subprime fixed were rising somewhat faster in that data.

And really the right way to look at this is to look vintage by vintage. So, the problem with the Mortgage Bankers Association, also, is you are not -- the basic problem and the thing I am talking about illustrates that you are not holding the pool constant. And, so, what you really want to do is look at a pool that stays the same over time. So, the way we usually do that is to look at vintages. The green lines on these two figures, that is delinquencies in 2005. So, this is looking at the 2005 vintage. This is months after origination, this is from loan performance data. And the red dashed line is delinquencies in the 2006 vintage. And what you see here is that the two figures are very, very similar.

Now, the scale is completely different. So, the number of ARMs that became delinquent is much higher, but that was off of a much higher base. Actually, what is remarkable about the data is if I put up every different category of mortgage and every different type of borrower, and I put up figures like this and I did not put the scale on them, you would not be able to figure out which is which because basically there has been deterioration across the board in every type of mortgage, in every type of borrower, in every type of loan. There has been a similar level of deterioration, and that points to what we are going to argue, which is that there was some common

thing that affected all of these pools, not something about the individual type of mortgage.

So, the other evidence, Chris did not mention this, but a lot of this you have already heard today. But one of the things, this word "teaser" I think is very misleading. For subprime borrowers, their teaser rate was something like 300 basis points more than a prime borrower would pay for identical mortgages. So, these people were not being lured in with some fictitiously low rate, the lender was not losing money those first two years. This is not credit cards where they lure you in with some -- they lose money for a year in order to make money for later.

The subprime lenders made money for those first two years. In fact, that was the only way they were going to make money was to make money in the first two years because, as Chris pointed out, all of the good borrowers left after two years and, so, the only people you have left after two years are people who could not, for one reason or another, most of the people -- I should say we occasionally find in the data these people -- we actually have the names of the borrowers. We have the deed registry data. We have the names of the borrowers.

So, in some cases, we can see that some person had a reset in 2003, and they are paying like 11.5 percent

right now and they evidently have not had any credit problems in the last five years. So, you know that that person could be -- you want to refinance them yourself. And I even would offer them 10 percent interest, but anyway that would probably get me fired.

Anyway, so, Chris also mentioned this. When you look at the loan level data, there is no loan level relationship between rate resets and delinquency. Borrowers, most of them become delinquent before the reset, but as you see, it transitions through the reset smoothly.

There is this perception out there. A lot of op eds have been written in which they say that lenders targeted the most complex mortgages at the least sophisticated borrowers. Not true. They targeted the most complex mortgages to the most sophisticated borrowers.

So, if you look at the average FICO on an IO ARM, it was 726; the average FICO on an option ARM was 707. The 2/28, which is typically a fully amortizing mortgage other than the fact it has this reset after two years, is a completely standard mortgage. It does not have interest only. The option ARM is -- so just to give you an idea of how confusing the option ARM is -- when we wrote a computer program to simulate option ARMs, the

program for a regular mortgage was five lines of code; a program to simulate an IO ARM was six lines of code; and to simulate an option ARM it was like 7,000 lines of code because they are incredibly complicated because everything changes. It all depends on what happens to the interest rate in the background -- that affects the amortization, that affects when the reset happens. It can happen stochastically anyway.

So, the other thing about this is the payment shocks are hugely overstated. For a typical subprime ARM borrower, in addition to the first mortgage, which had the payment shock in it which was the ARM, they typically had a second mortgage, the famous piggyback. The piggyback, so this is for the purchase mortgages, the piggyback was almost always fixed rate; it had a much higher interest rate. It was 11 or 12 percent interest and it was amortized over a much shorter period. So, 40 percent of their payment is fixed. So, the reset only affects 60 percent of their balance.

And then to add to that, the reset, say it was from 8.5 percent, these are for the '05 and '06 vintage. It was, say, at the peak. In other words, before we started cutting rates to solve this problem, it was going from 8.5 to 11. It was not from 2.9 to 19.8. So, this was not an exploding payment. It was a payment that was

going up ten, 15 percent. It is not enough -- for a lot of people, they had a lot of other problems that were much bigger than that, and that is what put them into trouble long before they ever got to the reset.

So, our view is that house prices played a key role in the crisis. Without falling house prices, we would not have a crisis. Let me be precise, though, about what I mean. This is the foreclosure rate in Massachusetts going back to 1989. And the point here is if you compare the foreclosure rate with house price growth, they are sort of the mirror image of one another. When we have had exceptionally low house price growth, so negative house price growth in late '80s and early '90s, we had exceptionally high levels of foreclosure. When we had exceptionally high house price growth in the early part of this decade, we had exceptionally low levels for disclosure.

House prices start falling, so I also bought at the peak of the market. So, you can see that point where it crosses from positive to negative, that is when I bought my house. The only good news is that the other crossing point over here in 1988, that is when the president of the bank bought his house.

(Laughter.)

MR. WILLEN: So, I am in good company. So, it

is a good forecast I hope.

Anyway, so you can see that foreclosures spiked up obviously when house prices fell -- we all know about that. You can see actually that foreclosures peaked actually in the summer -- well, locally -- appear to have peaked. They actually fell in the fourth quarter of last year and have not recovered in the first quarter of this year either.

But we did, and we have this paper called subprime outcomes. What we did was to do this basically counterfactual exercise. So, what we can do is we -- so, here is our view of what the crisis is. The crisis is we have 2002 borrowers here, exceptionally low foreclosure, this is the foreclosure hazard. So, for the 2002 borrowers, we have almost no foreclosures.

Then here are the people who bought in 2005. We have a data set which allows us to follow borrowers on every subsequent mortgage they have. So, these people may have refinanced in here. But we are following the homeowner over time and what you see is that the 2002 buyers, 30 months out, there are still almost no foreclosures. You look at the 2005 buyers, you see this huge spike in foreclosures -- enormous, two orders of magnitude bigger number of foreclosure for the '05 borrowers compared to the'02 borrowers.

So, what we were able to do is do this counterfactual exercise to ask the question what would have happened to the 2005 borrowers if they had gotten the 2002 house price appreciation outcomes, which you saw from the last picture were exceptionally good. And the answer is that we would have had much higher levels of foreclosures, and the reason for that is because the 2005 pool of buyers had a lot more subprime buyers. There was something like 15 percent of the people who bought in 2005 bought with subprime mortgages, whereas in 2002, it was something like two percent -- almost no one bought with the subprime mortgage. That explains the shift up in the line. But the crisis, that comes from something else -- that comes from the house prices.

So, let me go to policy solutions. Our goal here is to prevent unstable home ownerships. So, the subprime buyers, the key here -- I am running out of time, but the key here is what we show in the paper is that subprime buyers are not just at a higher baseline hazard. They are much more likely, under any circumstances, to go into foreclosure.

The other thing is they are way more sensitive to house prices. So, a fall in house prices is bad news for me, but it gives me a cold and kills the subprime homeowner. So, the goal, I think, of policy, is to

prevent these unstable home ownerships. To do that we think what we need is a comprehensive measure of the riskiness of home ownership that takes into account both the type of mortgage, the conditions, the FICO score, and all those things and the evolution of house prices.

So, what we want to look at, our goal is we think we should look at when someone buys a house or gets a mortgage to look at the long run likelihood of foreclosure. One important thing is to look at the likelihood of foreclosure on this mortgage but also to take into account that they may -- the way they got out of this mortgage was to refinance into another mortgage, and we should see if they may be able to get through this mortgage, but the only way they do that is by getting into another mortgage, which is unsustainable but that is of no concern to the current lender.

So, we can take a buyer, we can look at his LTV, his debt-to-income ratio, his FICO score, and we should be able to forecast how likely this person is to enter into a sustainable home ownership experience. What we have actually done is to look at subprime purchasers and compare them with prime purchasers, and this is what we found, this is using our whole data set. Using all the house price realizations in our data set, what we concluded was that a person who buys a house, and this is

collecting all the differences between prime buyers and subprime buyers, so both the type of mortgage and the characteristics of the borrower, our claim is when someone buys a house with a prime mortgage about three percent of those people will eventually lose their homes. This is looking out 12 years into the future.

By contrast, someone who buys a house with a subprime mortgage, we estimate that 18 percent, almost one in five of them, will eventually lose their home. Their home ownership experience will end with a visit from the sheriff.

So, what are we arguing here? What we need to tell borrowers is not the terms of the mortgage. What we need to tell a subprime person who is buying a house with a subprime mortgage is you have a very, very good chance of losing this house; in fact, you have a one in five chance of losing this house. And I guess I am going to go one step further, and we might even just tell them you cannot get this loan. I do not know why I have been thinking about disasters lately, but -- I know why, because we are in one. And, so, anyway, you would recognize this ship, of course.

So, I remember this, we read "A Night to Remember" in fifth grade. Of course, the loss of life mostly would have been averted if they had enough

lifeboats, but they only had lifeboats for something like half the people and even though those were not full.

So, what was the policy conclusion? I remember reading this in "A Night to Remember," like what was the policy outcome of this? And one idea would be that the steamship company should disclose that there were not enough lifeboats on the ship, but that is not what they did. There was a very simple policy solution to this, which was to just require that you have enough lifeboats to make sure everybody can get off the ship, which is what they have done ever since.

(Applause.)

MS. IPPOLITO: Thank you. Now, we will hear from John Lynch.

MR. LYNCH: Hi, I am John Lynch. I am a marketing professor from Duke University. I am kind of an alien in this conference here. As I look at the other speakers, we basically have a room full of Ph.D. economists with smart undergraduate's level of understanding of psychology. I am a Ph.D. psychologist with a not-so-smart undergraduate's level of understanding of the econ side. But I study consumer decision-making, and pretty much every speaker in the morning has talked about things that touch on the kind of the research that my colleagues and I do. So, my idea is to offer a

high-level perspective of what the field of consumer behavior would have to say about these discussions.

Just as a point of background, in 1980, I came to my first conference in consumer behavior and I went to this session on the topic of why consumers do not search for more information. Fantastic! Howard Beales and Steve Salop were there, and Brian Ratchford and Jim Bettman. There were people from economic perspectives and psychology perspectives. The basic idea is people engage in extremely low levels of search. One reason offered was that very quickly the benefits of search are outweighed by the costs. But the other main idea is that people do not search because it is so confusing to do so and that searching further actually does nothing more than make people less informed rather than more informed. That seems relevant to our discussions today.

As Pauline said, I am not a mortgage expert at all. I have done absolutely no research on mortgage decisions. But I do study biases in consumers' memory, attention, and perception and how these biases affect consumer decision-making across a variety of categories. I want to lift up in my remarks how critically choices are determined by selectivity at two levels. One will be called a consideration set. A consideration set is the set of alternatives that are actively considered. Out of

hundreds that possibly could be considered, some tiny, tiny fraction are actually considered, and that is pivotal to the ultimate decision outcome.

Second is extreme selectivity in what criteria are evaluated for those handful of considered options (e.g., monthly payments versus risk of default if home prices drop). I can connect these ideas to points of other speakers today. Like Brent, for example, I have studied economic effects of advertising and how advertising affects consumers' price sensitivity and ability to buy things that they like, but my explanatory constructs are those that I just alluded to here.

Similarly, I have worked on electronic shopping or online shopping. There, we study how information comes into markets and how it influences selectivity on those two sides of what alternatives get considered and what people think about for those alternatives that are considered.

In my work on internet retailing and internet shopping, I have written several papers about recommendation agents as a way to influence consumer consideration sets. I am going to relate that to mortgages - how the key to helping consumers is affecting their consideration sets.

Before elaborating this point, I want to mention

as a side-bar that I have been doing a lot of work on inter-temporal choice, which is an area that David Laibson is, of course, very well-known for. Inter-temporal choice is really all about what explains consumers, quote, "discounting of future outcomes" and their degree of preference for smaller-sooner versus larger-later rewards.

The basic theme of my work is about how discounting is explained by consumers' misperceptions of their opportunity costs or their relative opportunity costs now versus in the future. And I have been working on applying the psychology of inter-temporal choice to another financial decision domain, namely saving for retirement. David and Annamaria also work in this area.

I thought I would just pick up on a question that was asked of David after his talk. If you look at most of the discussion this morning and our panel, the focus has been on information remedies for errant mortgage decision-making. It is very interesting to contrast this with this retirement arena. In the retirement arena, there has been this dramatic change in regulation and actual practice to help consumers by providing less, not more, information.

In fact, yesterday, I was listening to a web seminar given by industry experts in this domain. This arena has been entirely taken over by ways to try to help

consumers by having less, not more information. A speaker made the historical contrast that they used to provide information, then they moved to try and provide education, and now they try to provide advice or help.

There are things like these "smart defaults" where employers will auto-enroll people in life cycle funds with an opt-out. There is also the practice of limiting 401(k) plan choice based on evidence that shows that when you offer people a large menu of options, they freeze and they do not choose anything or they choose things that are very low-risk options, which in that domain is a bad thing, not a good thing, because it is not going to get you the number you need for retirement.

An interesting question was asked of David right before the break related to the question of what is different between that retirement domain and this mortgage domain. There are two key distinctions I see. One of them is that in the retirement savings arena, the key mistake is an error of omission, basically failing to choose and procrastinating. Therefore, the idea of helping consumers is to make it simple to act. The whole movement to defaults with opt-out is in that line.

But in mortgage decisions, the key mistakes are errors of commission. There was a question earlier about "What about helping people to make faster decisions?" The

answer was, "I do not think it would help that much to speed up that process." The errors of commission are either choosing the wrong loan or choosing more house than one can afford given shocks of the sort that Paul suggested that a borrower should be concerned about.

The answer that David gave is the same answer I would give as my second difference. In retirement savings, the reason why you can get away with simplifying consumers' decisions is because you have these employers serving the role of benevolent agents steering employees' choices. For mortgages, there is no benevolent agent and there is a lot of self-interest for sellers to exploit consumers' information overload. So, I do not think the same remedies for bad retirement decisions can map exactly to avoid bad mortgage decisions.

But I want to give my take on this about what can help. This is going to be Consumer Behavior 101. I am going to tell you that in my field, if you want to understand what a consumer chooses in any one of a variety of categories, the single thing that is most important to know is the so-called consideration set. Assume there are capital N options out in the marketplace and the consumer considers small n out of the capital N. It turns out if you look at this literature that I work in, a naive model works well. It says that for any brand that was

considered, the probability of choice is one over small n; for everything else, the probability is zero. That model explains 80 percent of the explainable variance in choice across a very wide area of product categories.

So, just getting in the consideration set is the most important thing to determine consumers' choices. Let me add what is going to sound like it is a completely naive statement that is actually, I think, very profound in explaining consumers' choices. In order for an alternative to be chosen, it has to be considered. Most of the time you do not make a sale as a seller, it is not because people look at you and decide they like something else. Most of the time you do not make a sale is because you never got considered.

On the flip side, the second profound truth I am going to tell you is that in order for an alternative to be chosen, the consumer has to fail to consider a better liked option. And here I want to say that most of the time you do make a sale, it is not because what you sold to the consumer is what would have been best had they engaged in a more exhaustive search; it is because they failed to consider something else they would have liked better. So, understanding the composition of the consideration set is the most important thing to understanding consumers' ultimate decisions.

On the margin of what they do with that handful of alternatives that are considered, there are some interesting issues, but the most important thing is to understand, once again, what is in the consideration set.

So, the idea that I want to talk about I think is related a bit to Paul's recommendations is to ask the question of whether some government regulatory agency can enhance competition and welfare by affecting this consideration stage. Let's just think about what things might be at our disposal to improve consumer decisions through affecting that consideration stage.

As I mentioned, over the last decade I have been doing this research on online shopping where one of the big topics I have studied is personalized recommendation agents. You can get recommendation agents for anything -- even choosing your dog. There are various methodologies for this, though. Some require collecting no information from the consumer. Others ask the person a few questions, and you basically try to parameterize the individual consumer's utility function.

Now the "screening agent" has some idea of this utility function and the mapping of your utility function onto the features of the products, and it will simply sort the alternatives from those predicted to be liked best to those predicted to be liked worst. You can look at as

many as you want. But they will show you in a sorted order. If the sorting algorithm is highly correlated with your actual consumption utility, you get benefits as if you had searched from this exhaustive set while only looking at a handful of one, two or three alternatives. In some of my other work, I study the accuracy of different flavors of these recommendation technologies. The most powerful ones actually require you to -- for the individual consumer to give you information about how their utility changes over features of the product, so you are parameterizing their utility function over features. Interestingly, in most categories, those are not what are being used on online shopping sites. They are not being used because it is usually not in the seller's interest to share information about their products' features. Sharing the features is going to make it transparent to the buyer, how close I am as a substitute to somebody else.

And, so, it turns out that if you look in most consumer categories, the best recommendation systems are not in use because sellers do not have incentives to cooperate with some infomediary to provide the common attribute information that would allow a very effective screening.

My idea here is, what could a regulatory agency do in the mortgage arena? Well, it could require sellers

of loans to disclose the terms of the sort we are talking about. Next, it could have some very simple mortgage recommendation site that would allow personalized recommendations. A consumer would provide some information about her personal tradeoffs over mortgage attributes after receiving information about specific risks she might face given her personal circumstances. The site would estimate her utility function and return some sorted list of alternatives. Toward the top would be ones that actually might be good for her and the ones that might not be so good for her would be toward the bottom. I would say that disclosures are not going to solve the problems we talked about before, but affecting the order of the things in the consideration set actually will.

There is a very good book that came out fairly recently that talks, quite a bit, about the problem of mortgages. It's this book by Thaler and Sustein called "Nudge." I would like to relate my remarks to the themes in their book and recommend that book to you all. They talk a lot about "choice architecture." This refers to changing the environment in which people are seeing alternatives. They show you how small changes in the architecture can change decisions when education does not.

The idea of a "nudge" is something that is not making you do something, but just causing you to consider

consider things first that actually might be in your self-interest. When are these nudges most beneficial? They say when decisions are hard, infrequent, no feedback, you do not know your preferences, and markets will not correct your mistakes. If you listen to the presentations from the morning, those are the kinds of markets we are talking about.

And, so, my closing thought is that a benevolent smart agent can arrange a better choice context. This benevolent smart agent would collect from consumers a little bit of information about their circumstances. It would then help them understand that if you choose this kind of loan, you might have this higher risk of default, providing them warning signs about risk, as Paul was talking about.

But the most important thing about it is that can choose whether to take these warnings into consideration in subsequently providing information about their tradeoffs over attributes and risks. Unless they deliberately reject the warnings, when the agent presents alternatives sorted by their personal utility, they will likely see less dangerous options listed first.

In closing, the work I have been involved in shows, that providing more information has very little impact on many decisions. Moreover, if options are very

dissimilar, putting them side by side and making it an easier comparison has very little impact. But changing the order in which consumers consider the alternatives has a fairly dramatic impact. You the prospective home buyer might actually trust the order of the recommendation, because it was a government infomediary that was requiring the lenders to provide information about the features of their loans. Because the infomediary was providing this preference elicitation tool, the order of recommendations actually is determined by your own preferences. In my opinion, that could be beneficial. Thanks very much.

(Applause.)

MS. IPPOLITO: Now, we will hear from Alex Pollock, who is currently at the American Enterprise Institute, but spent 35 years in the banking industry and has a lot of knowledge of this area.

MR. POLLOCK: Thank you, and special thanks to the FTC for holding this exceptionally interesting and useful discussion.

My talk is about the Pollock one-page form. Here it is. One of our colleagues at lunch said, "Well, I suppose you are going to talk about the infamous one-page form." I said, "Naturally, but I think of it as the famous one-page form. It is a nudge, to use the comment of our previous speaker. I am interested less in getting

people to choose what might be the perfect mortgage for them and instead to focus on, "Can I afford this mortgage I am talking about."

To pick up something John just said, the thing which is really most important, in my mind, for a borrower as well as for a lender, is "Am I likely to be able to pay this loan?" Let's give that an early and high degree of focus.

Now, I looked through the slides of Susan Kleimann, who is speaking later, and there are a couple that really appealed to me. One says it is easy to make something that is easy to read and visually compelling, but can you also make it understandable and clear? That would definitely be the goal we are after. A second of her slides, which I think is really good, says, "Decide on the desired action for the document." Do not do anything until you know what you want consumers to do with the information.

Well, here is my idea about what I want consumers to do with the information: think about whether they can afford this loan. It is, in other words, to underwrite themselves. Of course, the lender is going to underwrite the borrower. With a reasonable degree of probability, under a reasonable range of circumstances, is the borrower going to pay and is the probability of

default affordable to me? That is the lender's question, underwriting the borrower. The borrower should be asking the same question about their own situation. Underwriting themselves is the goal, and that is more an active idea than a passive idea.

So, it strikes me that one thing to think about is that getting information is a passive idea. We really want to give them these disclosures, in my case, give the one-page form, in order to cause an action -- which is underwriting yourself. It seems to me that is more important than choosing which of the millions of possible mortgages might be the best.

Now, Paul said something I think is right about the role of house prices in our current crisis. A bubble, which is what we had, is, by definition, an interaction of prices going beyond their sustainable levels and credit expanding to allow those prices to be paid. The rise of the prices induces further flows of credit and that inflates the bubble. There is a lot of procyclical behavior, a lot of procyclical product development, procyclical decision-making. That is why we have cycles.

Now, looking through the cycles, as a matter of philosophy, my position is people ought to be able to take risks. It is not the government's or anybody else's job to tell them they cannot take risks. But when taking

these risks, they ought to know what risk they are taking. Correspondingly, lenders ought to be able to make risky loans, but they ought to be required to tell the truth in straightforward ways about the nature of the risk from the point of view of the borrower.

Think about the risk of getting a mortgage and buying a house. It is an important risk. But relative to some other things we can consider, say riding over on the ship that brought our immigrant ancestors steerage class and launching into life in the new world, the risks we are talking about today are pretty minor. How about like my great-grandfather getting on your wagon and launching off to homestead the farm in the wilderness? We are talking about pretty modest risks compared to that.

America is about the ability to take risks, but it would be good to make the risk taking as informed as possible. Absolutely it is the case that the way to do that is to give less information rather than an excess, but the relevant information about underwriting yourself and whether you can afford this loan.

So, I hope you get a chance, if you haven't seen it, to look at the one-page form, which is my attempt to do this. It starts off with the notion, as we all agree, that complete information, as we try to give it in mortgages, is the same as giving no information, at least

in many cases. The more we try to make the information absolutely complete, the more we succeed in effectively zero information transfer and just baffling people. The Mortgage Bankers Association tells me the average closing package now is 80 to 85 pages of things in small type and confusing language. If we make them then sign something that says "I have read and understand this information," what we are forcing them to do is lie because, of course, they have neither read nor understood the information. If you get down to the bottom of my one-page form it says "Do not sign this if you don't understand it," which may not cause you to always understand it, but it is a more honest way to approach it.

Another thing about disclosures: because of regulatory systems and possible litigation, disclosures come to serve the purposes of lenders rather than serve the purposes of the customers. The disclosures develop in order to protect the lenders from legal liability and regulatory action, as opposed to helping the consumers. About the only objections I have gotten to the one-page form approach is from lawyers who represent lenders. They are afraid that by having to make estimates -- you have to make estimates to do this right -- you may be creating some new kind of lender liability which, naturally, they do not want. Therefore, the safe harbor idea I will

mention later is an important factor.

The other thing is timing. To get the best disclosure in the world is useless if you get it at the mortgage closing. Everything is decided by then. It is useless if you get it two days before the mortgage closing. It has to be soon enough in the process where you actually can make a decision that is meaningful. So, as soon as possible. I am suggesting upon approval of the mortgage by the lender. That is because at that point the lender has all the information it needs to underwrite you; it can therefore share that information with you so you can underwrite yourself.

The story of the one-page form is that a little more than a year ago I was testifying to a subcommittee of the House Financial Services Committee. I made the points that we all agree on: how too much information is the equivalent to no information, that we have all these confusing pounds of paper. I said, we ought to be able to get the things that are really relevant on one page. A couple of the Congressmen said, "That is a great idea, we ought to do that."

So I then went back to AEI, sat down at my desk, and said, "Okay, big mouth, why don't you see if you can actually do it?" And I set myself the following limitations. It has to be a one page and you cannot make

the one page by making the type smaller. Of course, as we all discover, it is a lot harder to actually do it than to say that somebody should do it. I went through a lot of iterations. I went around talking, especially to young people at AEI, saying, what do you think about this, does that make sense to you? When you do this, you always realize when you get used to any trade, you lose the sense of what a specialized vocabulary you deal in and how that vocabulary to other people is meaningless.

Among the other people I tried it out on were my own children. One is still in college, three are out. They are all magna cum laude graduates. One of the things, especially the daughters said, was "Dad, this is full of words we do not understand." (They obviously did not study finance.)

So, I did decide that you had to have, along with the form, what turned out to be a one and a half page set of (I hope) common language and avuncular descriptions of what the terms mean. I pictured this also possible on a screen where you could click and have the terms explained

Having done all this with my own highly informal market testing and intuition, what does it take to underwrite yourself? In the first place this form suggests that a key action-oriented disclosure, which you

do not find in any other disclosures: your income. You find in capital letters "This is the income on which we are basing this loan."

Now, we know about liars' loans. If you were lying about your income, this gives you a chance to reconsider your lie -- or maybe if your generous estimate. But if somebody else was lying about your income for you, this gives you a chance to fix it.

Somebody said this morning people do not understand interest rates. What they understand is payments. So, this is your payment. Not just your loan payment. Your total payment, "PITI," as they say, principal, interest, taxes and insurance, and we ought to throw in mortgage insurance premiums, if any, as well.

How much a month, how much a month at the introductory rate, if there is one, and how much when the loan resets at its fully indexed level. We also want to tell you, and this was a suggestion of one of my family member market tests, what is the maximum possible rate on your loan. Okay, this is going to start off at 6 percent. How high can it go? Give me the worst case. 14 percent? Well, I want to think about that. How likely is 14 percent?

This is the full payment: principal, insurance, taxes and insurance, whether or not your insurance and

taxes are being escrowed, how much in dollars in the beginning and after reset and what percent that is of your income.

Is there a prepayment fee? We heard this morning from the great research that Jan and Jim did, that two-thirds of the people cannot tell if they have one or not. We ought to make it know. Also, what is the check you will have to write at closing for points and closing costs.

When this one-page form was introduced into the House of Representatives, interestingly enough there was a debate among some of elected representatives of the people over whether the borrower should sign. I think the borrower should sign and also the lending institution -- not the broker, but the organization actually making and underwriting the loan. Some Congressmen on the leftish side of the spectrum said, "If you make the people sign, you are saying that the borrower should have some responsibility." Well, yes, I am.

In providing this information, I suggest a safe harbor. Some things are estimates, like insurance payments and taxes. If you give the estimates to the borrower, and they are the same estimates used in underwriting the loan by the lender, that should be a safe harbor.

Senator Schumer introduced a one-page form bill a few months ago. The City of Washington, D.C. actually has made a form very much like this now mandatory for adjustable rate loans. This, by the way, was a highly unusual alliance: the Washington, D.C. City Council and the American Enterprise Institute. Soon, we are going to be able to do some research on the Washington, D.C. experience.

Now, Jan and Jim had this wonderful line in their presentation this morning: disclosures that make sense to well-intentioned bureaucrats often bewilder consumers and, of course, that also goes for well-intentioned fellows of the American Enterprise Institute. So, we do want to keep learning. A big mistake is to do something only once. The magic of markets is you try it out, keep learning, and keep getting it fixed up.

The key idea is one-page form focused on whether you can afford this loan. If you want to take a risk, go ahead, as long as you understand the risk you are taking. I have nothing against people who want to eat oatmeal three times a day for three years, so they can have the house of their dreams. But they'd better understand what they are signing up for.

I think this is a nonpartisan or an omni-partisan idea and it ought to be done whatever else in the

mortgage area is done or not done.

There is a further possible use. I picture high school personal finance classes with this form or something like it that says, when you are getting a mortgage some day, see if you can fill out this form about the mortgage. It will tell you a lot about whether you can afford it. Who fills it out? It would be wonderful to have not only lenders able to complete such a form, but if the borrowers themselves knew how to complete the form on their own behalf. That would be a useful form of education, to get people into an active role of underwriting themselves.

In sum, I hope we will keep making progress in the direction of the one-page form.

MS. IPPOLITO: Okay, well, thank you very much.

(Applause.)

MS. IPPOLITO: Now, we will hear from David Weil who is the Everett Lord Distinguished Faculty Scholar at Boston University's Business School and he is also the co-director of the Transparency Policy Project at the Kennedy School.

MR. WEIL: Thank you. Let me start also by offering my thanks particularly to Jan and Jim for inviting me.

It seems to me the mark of a successful

conference is if it is coherent or whether you are always looking back at the program to figure out what is this conference about, and I think I am certainly struck by how much the presentations this morning and this afternoon have built on one another. So, I hope my comments build on a lot of the excellent presentations and research we have heard about so far.

I guess I should also thank Pauline for lowering expectations about my presentation, because it is absolutely true, I am not an expert on the mortgage market by any means. And my comments do come from thinking about the problem of disclosure from a somewhat different research base, but I hope to offer some insights on many of the questions we are discussing today.

I should also thank the Bureau of Economics. My home base is Boston University. I am in the Department of Finance Economics, and I thank the FTC for sending my colleague -- Mike Salinger was the director down -- here back to us. We are very grateful for that.

I am going to make comments based on primarily actually the transparency policy project research agenda that I have been working with Archon Fung and Mary Graham at the Kennedy School at Harvard, and unlike other speakers, I will hold them accountable, as well as me, for the comments I will make because I think this does sort of

represent our collective view about, as the slide says, both the promise and pitfalls generally of transparency policies and how that might pertain to some of the questions of the mortgage market crisis.

And I should start by saying our research enterprise comes at some of the very same questions, particularly the second panel this morning was discussing, but from a different sort of angle. Rather than looking at building up, in a sense, understandings about consumer choice from the ground up through experiments or surveys, we decided to look at this growing phenomenon of the application of mandatory disclosure across a whole range of regulatory domains with a similar kind of question, which is whether one is looking at an area which disclosure has long been applied, financial disclosure, or newer areas, nutritional disclosure, health care disclosure, disclosure on different kinds of product safety, a whole range of social problems and particularly social risks over the last 20 years, Congress and state level governments have chosen to address through saying, "Give people more information."

And as, again, many speakers have said, we all now know and there is abundant evidence to say that more information is not necessarily better information, and more information does not create more informed choice.

What we decided to do was look at 15 different domestic and three international transparency policies that in one way or another required mandatory disclosure of information, and ask the question both through our own research and also looking at an enormous amount of research that had been done by others, what really explains those cases where you see these policies actually having an effect on behavior and, ultimately, being effective in terms of actually achieving policy outcomes, the policy outcomes they were designed to address, and what characterizes the cases where they are not effective.

And I should start by emphasizing I am hardly a transparency prophet or advocate. I mean, I think maybe because of economics training I came into it with some skepticism as did my colleagues from a political, science, and legal background. And I think the result of our research says, in general, transparency policies do not have the effects they were designed to have. Again, I think we heard a lot this morning to suggest some of the reasons why in terms of underlying behavior. But we also came away with some examples, which I will talk some about, that indicate where transparency actually can have an impact.

So, let me just start by a quick walk down -- it is not exactly memory lane, but transparency policies we

all know and maybe in some cases love and in other cases not, but just to give a sense of when we look at transparency mandatory disclosure it goes everything from the ubiquitous nutrition labels that we see on everything to a more recent example of transparency. As a response to the number of rollovers, the rollover crisis in the early part of 2000 to 2001, Congress adopted a transparency policy which was rollover SUV standards, a five-star system where every SUV has to have now on its sticker an assessment of the likelihood of rollover from a one to a five-star rating.

In addition, this is taken from the NTSA site, but this is also similar to what you would see on a sticker of an SUV, not only an assessment of where the car stands, and that is the little black diamond on each of those, but also where it stands relative to other similar kinds of cars for consumers to make choices. That star rating is also associated with an actual probability of a rollover, though people tend to think and use the sta system. So, a 2007 Cadillac Escalade is a three-star, a 2007 Ford Explorer is a four-star. If you go to earlier periods of times, I could have given you examples of two-star SUVs. But anyway, again, a system that is based on transparency.

You all know this one, our Homeland Security

alert system which gives us a transparency-based assessment of the threat we face. As a public service to you all, I have looked at the -- this is May 20th, this is two days old, but we were at an elevated yellow status, unless you are taking a flight and that is at an orange status. I always update this before I give a talk. It may be an indication of the utility of this system is the only thing I ever have to change is the date associated with it because it has been the same thing for quite some time now.

L.A. County, and I want to talk more about this, and there has been some superb research done about this. L.A. County has a different kind of disclosure system which tries to rate restaurant hygiene. And basically to deal with what was, in 1998, a crisis of some undercover reporting work by, I believe, ABC News showing atrocious conditions in the back of kitchens, the L.A. County Government adopted a system that said every L.A. restaurant must translate their past health records into a rating of an A, B, or C that will be posted by the menu in the front doorway of every restaurant in L.A. County. And these were just some -- on my favorite delicatessen street in Los Angeles, these are three different delis with an A, B, or C rating, and that was used as an instrument to actually change the behavior of hygiene practices and,

ultimately, the number of hospitalizations for food-borne illness were to be addressed by that transparency system.

And then, finally, I will show you something all of you should receive in the mail, though many of you might not even be aware of it. It is the drinking water contaminant report required by the Federal Government. If you cannot read that writing, I assure you if you could read it, it would be of no help to you. It gives detailed levels of a wide variety of organic and inorganic contaminants in your water supply. I am married to an environmental scientist who assures me she can get very little information out of this either. But, again, the spirit of this was to address a major crisis, in that case in Milwaukee, of contaminants in a municipal water supply that led to that system.

So, there is this pervasive kind of application. Two of the cases I just showed you and possibly three, depending on basically how you evaluate nutritional labeling, but I would certainly argue the SUV system and the L.A. County system have been enormously effective and have had an impact. On the other hand, the Homeland Security system, certainly the drinking water system and a number of other systems I could give as examples are the cases of a transparency system generating paper or information that seems to have very little effect on

behavior.

So, the major question about what drives this is sort of, what are the underlying factors, the factors associated with the transparency system that either lead to effectiveness or not. And let me boil down sort of the nub of our argument and our evaluations of these different systems. And there is more on this, there is a paper, I think, that will be available on the website, and there is a book we published last year called "Full Disclosure" that goes into this in greater detail.

But the basic idea is that to be effective, transparency systems require a much more complicated chain of events than often are realized certainly when we talk about transparency, even when we legislate transparency. And that is really an interaction of both users and disclosers that needs to occur if we ultimately are going to have effectiveness. And it all starts with the fact that whether we have a transparency system or not -- and, again, there was excellent discussion about this this morning -- disclosures are going to provide some level of information on a voluntary basis, and users are going to use that and that is going to help shape -- it is not going to, in all cases, be the primary driver -- but it will certainly shape their perceptions and calculations about decisions, which then become embedded in the actions

and behavior they take.

So, one part of any system of consumer choice, of products or services is about the information they can get through a voluntary basis in making actions accordingly. The second part of this sort of action cycle of activity is the perception of those changes in behavior by the disclosers have to occur. They have to perceive that the users are actually responding to some set of information, make their own judgments and calculations, and also translate that into some type of behavior change.

And the whole notion of a transparency policy is simply to say there is some argument about a symmetry of information, other kinds of information problem where the notion is the voluntary information is not sufficient, there is other information that should be provided. Therefore, the mandated information disclosure, similarly, has to work through that cycle of action and reaction through user and discloser activity.

In particular, the cases that have been the most effective are where we argue information is embedded. We use the term "embedded" in terms of user decisions. And that means that users, by receiving this information, have the right information at the right time and in the right form so it has value of them, it is comprehensible, it is compatible with their decision routines to make choices

that then actually change behaviors and desired directions.

Equally, you have to believe something about the same set of embedded activities on the disclosure side. Disclosures, for instance, have the capacity to actually see behavior change of users through some means, whether it is point of sale information or just direct observation, you have to believe that they are going to do that and also that that information is compatible and so on with their behavior. Lots of obstacles that have been well enunciated this morning around that, both on the user side -- obviously, the whole literature on cognitive errors is absolutely germane to understanding why that can break down, as well as other things which I will talk less about here, but things like gaming on the parts of disclosers in response to that information.

But really the key idea here is the -- and I think most pertinent to our discussion at the conference -- is the embeddedness of the users, really understanding how users both perceive and then use that information in making their decision. And I think if you take that perspective, you can look at sort of -- let me offer the two polar opposites of effective and ineffective and then let me make some closing remarks of home mortgage disclosure.

Why do the restaurant hygiene quality cards work so well? There is a wonderful study, if you are interested in information disclosure systems, by Phil Leslie and Ginger Jin on the effectiveness of the L.A. County system, and they find remarkable impacts on that in both revenue structures and on hospitalizations for food-borne illnesses from that system over a relatively short period of time. If you think about having A, B or C, consumers get that information. We all know what an A is, a B and a C is, and getting that information at the point of sale, at the moment you are walking in and evaluating a restaurant turns out to be incredibly powerful. Contrast that with the drinking water example I gave you, and you can see why that very difficult information to both parse and turn into some kind of risk assessment is so problematic.

For home mortgage disclosure, let me just suggest questions not answers. On the user side, clearly, when borrowers receive information is of decisive importance, who provides it, the whole issue of agency we have discussed a lot at this conference, and then how well do they understand it. And I want to make a comment specifically about I think a distinction that has not been adequately -- it has been hinted at or alluded to in a number of presentations, I want to make it more pointed.

But how well do they understand it? I want to suggest there are two its there.

Equally, on the embeddedness on the disclosure side, whose behavior are we actually trying to change, along with the users? Who in the system of mortgage provision are we actually trying to change behavior through the disclosure and how is that best effected?

So, the perils for home mortgage, one is obviously user embeddedness. The deliverer of information is a party who sometimes does not have interests allied with the end user in providing full disclosure or useful disclosure, and that is one problem that I think we have talked a lot about.

The second thing is, again, we've discussed a lot about cognitive errors and difficulties in understanding both cost information, but I want to stress here the second piece, which is the risk side of it, and this goes back to I think what Paul was raising at the end of his discussion. I think it strikes me as incredibly important to integrate the kind of risk analysis that Paul was describing at the end of his presentation into the kinds of information provided to potential borrowers.

And I think there is at least some reason to be -- again, maybe this goes back to Pauline's assessment of my knowledge of this area -- but I come away with some

hope that there are prospects for using transparency more effectively here. Certainly Jim and Jan's study of consumer mortgage disclosure is very helpful on the side of helping people understand just the basic terms and costs better. I think that suggests that we can do that.

I want to just leave you with one idea on the risk side because I think -- and this is the distinction I would perhaps introduce more pointedly than has come out before. I think we are all concerned about borrowers really understanding the risks they are facing in the longer term. When you face this variable rate, the possibility of facing a higher rate on disclosure forms, including the disclosure form that has been presented, there is this notion you might pay as much as 14 percent.

The difficulty that I think people have is understanding, "how do I think about that in terms of probability?" Everyone thinks, yeah, some poor schmoe might face it, but I certainly will not. Integrating sort of the risk of ultimately things not going the way you anticipate and ultimately facing a situation of foreclosure is what we want people to understand.

So, what I will leave you with is a proposal on sort of giving some measure of the likelihood of a mortgage rollover and thinking about devices to do that, and I would argue to you that requires thinking about two

kinds of parameters. One is the average credit history of the person applying for the loan. We have to know something that you might be very different, and this is a way to force people, when they are taking out a mortgage, to really think about themselves relative to other people, which is a clearly important part of helping people understand information.

And then, secondly, thinking about -- and these are not well characterized -- but think about different kinds of mortgage options available that independently lead to different levels of risk for default and allowing people to actually find themselves on the matrix, which has both, I think, positive effects on assessing their own risks and also thinking about where they stand relative to other borrowers. Thanks.

(Applause.)

MS. IPPOLITO: Thank you. Do we have any questions or any thoughts? Susan?

MS. WACHTER: I actually have two questions, one for David Weil. I understand in the psychology literature that there is a concept of positive bias in which individuals assume that they will have better outcomes than others. What would this mean for the 14 percent datapoint in your chart?

And a question for Paul. There seems to be

somewhat of a disconnect, between the descriptive part of your presentation and the proscriptive part. In the proscriptive part, you are talking about putting together an index of risk, which my understanding is based on the characteristics of the mortgage. So far, so good. But in the descriptive part, the major risk for foreclosure is that prices plummet as an aftermath of risk layering.

It would seem to me that the riskiness of taking a mortgage, particularly one with some of these characteristics that has to be paid in the short run and, therefore, needs to be refinanced, depends on the course of prices. If, in fact, part of what we are seeing is systemic, that as mortgage conditions overall get looser, there is an unsustainable increase in prices. Are you not missing the major risk?

MR. WEIL: Quick response. I think there are a number of different psychological phenomenons we know about how people make choices and how people think about risk that we do want to both understand and then use to advantage if we are going to have some kind of different system of mortgage disclosure on the risk side, and one is that we know that in lots and lots of decisions people are risk averse. So, people fear the downside more than they desire the upside if they are faced with sort of choices on losing things or symmetric gaining things.

So, in a sense, we have to understand why people don't think about that as much when making some of these mortgage decisions. I mean, again, I should pose that more as a question rather than a statement given my background. So, I think that is one aspect of what we are talking about because the other psychological phenomenon I think we do see in these decisions is the notion that it will not be me, that this over-optimism that "yes, you have told me that some poor schmuck is going to pay 14 percent, but it surely will not be me." I think that is exactly the kind of thing -- we have to give people more than simply the statement of two interest rates to think through, or else they are going to be biased in that direction.

And that is why I cite the SUV. The SUV is actually a very complicated probability assessment that most SUV buyers actually do not quite know what the difference between a one and a three-star is. They just know if they know there are one-star and three-star vehicles, they sure as hell do not want to put their kids in a one-star vehicle. And I think that is one of the ways you can sort of deal with that particular aspect of cognitive error.

MR. WEIL: I will just take a crack at it. So, there is pretty big literature in consumer behavior about

people's biased perception of their own personal risks. So, basically, for example, if you ask people about their likelihood of getting sexually transmitted diseases, people are very accurate in saying what is the base rate probability, but as you ask about people that are more and more similar to them getting up to themselves, they become more and more optimistic. So, that is the case.

So, I would say that you probably do not want to have a system where you leave it to people for their own self-assessment of risk. I would say in like what I would envision, you try to collect some information from somebody about their personal circumstances that would allow this recommender system to assert to you that somebody with your profile has this probability of winding up defaulting on your mortgage if you pick this kind of a mortgage. So, I would assert to people what their probabilities were in some way if it was possible rather than leaving it to their own imaginations.

MR. WILLEN: I think I will give you an answer to a question, which may not be the question that you are asking. But the way I interpret it is -- so, the way I envision this, and, again, this is all somewhat speculative -- is that we have some given distribution of prices from the data.

And, so, just let me remind you in Massachusetts

at least, which is what this is based on, we had a bubble; prices rose faster, rose by as much, over a much shorter period of time in the 1980s, in the late 1980s, mid to late 1980s, and fell by much more than they have fallen now over a very short period of time. In fact, one of the things we did with that 18 percent number was actually to basically -- for subprime borrowers, even though there were no subprime borrowers in 1989 -- we did it as if they had existed. So, we were very careful to put in what we thought were -- to basically make it --

MR. POLLOCK: Excuse me, David, there were a lot of subprime borrowers, only they had FHA loans.

(Laughter.)

MR. WILLEN: Yeah, right, it was the government that was the one who was losing money, so no one really cared. So, yes, that is a good point. I do not want to get into that right now.

But, anyway, obviously the borrower was -- there is no reason that the borrower should take into account his contribution to the bubble. In other words, what he should take into account is he should have, in forecasting the likelihood of foreclosure, he should take into account the possibility that they were in a bubble, and I think, in some sense, we do that because we are taking into account all these price histories which include the price

histories, which included dramatic falls in prices.

Now, you are right, someone who bought a house in -- the danger here is then we have to get into the business of forecasting prices. And what I am saying is you can take some, and we may even want to do that. You are right. I mean, if you go look, the difference between someone who -- according to our estimates, the difference between a subprime buyer who bought a house in 1998 and a subprime buyer who, in our imaginary world, bought one in 1989, is the difference between a six percent chance of foreclosure over 12 years and a 50 percent chance of foreclosure over 12 years.

So, that is exactly right and, ideally, you would have some way of doing that. That gets you into dangerous territory because in the economics profession, one of the things we are worse at is forecasting anything.

(Laughter.)

MR. WILLEN: I work at the Fed. But we are particularly bad at forecasting house prices. And that is not to say that a lot of people did not believe that there was a bubble going on. But, I mean, ideally, you would try and incorporate those things into a forecast of what you thought would happen to the borrower. I guess what I am saying is that it really is a sequence of mortgages that the borrower is getting. So, someone who bought a

house this 2004, the issue was not would they be able to make it out of that mortgage, the issue was would they be able to make it through five more mortgages that it was going to take them to really be a sustainable homeowner.

Just remember about the bubble. In 2003, I mean, there is a Brookings paper, "Is There a Bubble in House Prices." That was written in 2003. I think people thought there was a bubble in 2003. And then we had three more years of mind-blowing appreciation. So, you know, calling bubbles is tricky.

MS. IPPOLITO: I would like to make a comment on John Lynch's idea that the retirement situation is a much simpler issue and we have moved to a system where we try to give people recommendations, you know, life cycle funds, if you are 20, here is what experts recommend, sign up for this, and then when you are 30, we will make adjustments for you, and it gives you a reasonable saving plan for retirement.

As I have listened to today, I have been struck by we do not even agree on what it is that we would disclose. I mean, there is a sense in which if you look at Alex's form, it is the mortgage written narrowly. If you look at Jim and Jan's proposal, well, they are including taxes and insurance and credit insurance and optional things that are part of the mortgage deal. And

then we hear that, well, you really should be thinking about the housing crisis and whether this is a high price or a price that is likely to decline because that affects your risk. And then we know that who you are is an important determination of the likelihood that you will have to face foreclosure.

And, so, in thinking about an expert system to give people advice, it is really a very complicated problem. But given how complicated it is, there is almost more need for it. Is there any kind of consensus or broad agreement on what a person with a 650 credit score, who is 30 years old, who has a young family in an urban area, what kind of mortgage normally is best? Do we have any information about that?

I mean, I think that raises a set of interesting questions just in terms of advice, you know, helping people as they face these decisions.

MR. POLLOCK: May I just make a correction in what you said about Alex's form? Alex’s form is not the “mortgage written narrow,” it is the mortgage's impact on the borrowing household, including all the elements of the payment and, in particular, dollars of payment relative to income.

MS. IPPOLITO: That is true, I agree. I agree it puts the person in the contract and that is very

important. Yes, I agree.

Any other questions?

MR. KLEINER: Morris Kleiner, University of Minnesota. To what extent does the discipline of the market really take care of these boom and bust cycles? On the borrower side, certainly Bear Stearns, Citibank, and other firms have taken real hits and they are not likely to engage or lend money to individuals with poor credit histories over long periods of time. And to what extent does the information disclosure go beyond the discipline of the market?

MR. POLLOCK: Well, I think information disclosure done right should make the market work better. You want people to be generally free to enter into contracts. But if one side does not understand what the contract means, you do not have good market discipline.

MR. WILLEN: One thing, we have thought about this a lot and a lot of people brought this up. When we showed these pictures about foreclosures, a lot of economists said, "Who cares, the borrowers knew what they were getting into, the lenders knew what they were getting into. So, what business is it of ours?"

So, obviously, one of the things that we are getting at here is it is not clear that the borrowers knew what they were getting into. I do not think borrowers

understand when they got subprime loans, bought a house with a subprime loan that there was a good chance they were going to get to know the sheriff. That is one thing.

But then another thing about this is that, you know, the reason why there is a public policy issue here where the market -- this is not simply a market issue -- is, you know, the externalities of foreclosure, and I know Richard has all kinds of opinions on this, but there are externalities to foreclosures, and the fact that you have empty properties is one of the things we are certainly confronting in Boston right now. And then the other thing is there is this -- you know, let's face it, we are talking about bailing out a lot of borrowers right now. That is what Barney Frank wants to do and -- that is off the record.

(Laughter.)

MR. WILLEN: So, anyway, there is a time inconsistency issue here that if borrowers know that we are going to bail them out, then none of this stuff matters. There is nothing -- I mean, if they know that or if they believe that we are going to make them whole, then they are going to start doing even more reckless things and, to some extent, you might argue that when people, especially when they get something like an FHA mortgage when there is some stamp of approval

from the government, the government is encouraging them to do this, the government is making this possible, then they are going to think, "well, this is not going to go wrong, and if this does go wrong, someone will help me out."

MR. LYNCH: So, are you envisioning that the adjustment for the market forces would come from the consumers' response or from the sellers' response? The sellers would then decide not to offer these products.

MR. WILLEN: The sellers, which they have already done. So, let's just get it straight, we do not have any subprime mortgage problem any more going forward because we do not have any subprime lenders anymore. So, that works.

On this whole issue of whether, you know, when they originate the distribute model, whether the intermediaries -- they thought they had no skin in the game. They may have thought they had no skin in the game, but as any employee of Bear Stearns can tell you, in the end, they did have a lot of skin in the game. So, they may have been -- if someone made a mistake, if someone did not have full disclosure, it was the Bear Stearns employees who thought that somehow because they were not holding these mortgage -- well, okay.

First, that they were actually holding the mortgages and, second, that just because you are an

intermediary in this business does not mean you are not hugely exposed. I mean, every single one of the subprime lenders in Massachusetts is out of business. So, anybody who worked there is looking for work.

MR. POLLOCK: I think we get adjustment. People are smart. They see what happens, they experience it themselves or see it in their family or their friends or they read the paper, so you are going to definitely get adjustment on both sides of the market.

In terms of the information, one of the things to think about is the role of the mortgage broker. Brokers had about 60 percent or so of the American mortgage market. Now, there was someone, who once the mortgage was closed had no continuing exposure, unlike, as you point out, many of the other intermediaries.

When we talk about who you are getting advice from, well, of course, to some extent you are getting advice from the same broker about what loan is good for you. This is one reason I think it is important, in terms of the disclosures which would help people understand better their ability to pay, what they are signing up to pay, is to have them come from the lender, who is actually making the credit decision.

MS. IPPOLITO: I guess I would add one final comment to close it out. That if we do currently have

federally required disclosures on mortgages, if we are going to require disclosures, we should at least make them better, it seems.

On that note, thank you all. We will take a short break.

(Applause.)

SESSION IV: DEVELOPING DISCLOSURES FOR REAL CONSUMERS TO HELP PREVENT DECISION, DELINQUENCY AND FORECLOSURE - WHERE SHOULD POLICYMAKERS GO FROM HERE?

MR. LEARY: We will go ahead and get started. Again, we have an embarrassment of riches on this panel. So, we should try to get going so everyone has a chance to give their full presentations.

What I will do is I will introduce panelists as they come up to speak. As Pauline was saying, as she was wrapping up the previous panel, I think there have been -- we have heard some conflicting messages as to whether disclosures are the answer or whether they are an answer, whether they could have helped us avoid the problem we are in now, and how much they can do to help us prevent problems down the road. But at the end of the day, we do have a fairly extensive set of mandated federal disclosures surrounding the mortgage transaction and it is, at the very least, easy for us to all agree that if we are going to have that sort of a set-up, the disclosures should be as clear and effective and useful to consumers as they possibly can be.

And, so, one of the main goals of this panel is to discuss how to do that, how to create useful disclosures, how consumers use disclosures, how consumers understand these transactions. And addressing that first

will be Jeanne Hogarth. She is an economist at the Federal Reserve Board and she is the manager of the Consumer Education and Research Section in the Division of Consumer and Community Affairs. She does research on consumer behavior in mortgage markets and she is also responsible for the Board's consumer information materials on financial services. Jeanne?

MS. HOGARTH: Thank you, Jesse. And I also want to extend my thanks to Jan and Jim and Micah for all their hand-holding and help on this.

I thought it would be helpful, at this point in the proceedings, to actually bring in the voices of real consumers. I also have to say that everything I learned about PowerPoint I learned from Susan Kleimann.

This quote happens to be from a project that Susan and a cast of thousands did on mortgage privacy notices. Next to mortgage notices, your favorite notice is your privacy notice that you get from your bank. "The design is nice, easy-to-read, nicely set up, the whole italic, bold, lines, easy-to-read, not confusing, you do not have to plow through it." "It is good if you were going to compare them," because that is what we want consumers to do right. "You can go put this one to the next one. You can go yes, yes, no, no, very symmetrical."

So, what do we mean when we are talking about

disclosures for real consumers, and where do we go from here? I am afraid that my presentation is going to probably raise more questions than it answers. So, I just want to set that level of expectation. And just like every other good Federal Government worker has issued their disclaimer, I need to issue mine, especially because some of the things I am going to say I know do not reflect the views of the Board, the banks or their staffs. It is just Jeanne up here.

So, what do we want consumers to do? And, as somebody mentioned what are your goals for these disclosures, what do you want them to do?

Number one, what I want consumers to do is shop around, and that means how do they access information, what is the timing of that information. A lot of our disclosures, no offense to Mr. Pollock, but giving them at the time the loan is approved, is not helpful. How does that help me know that this is the right loan for me? So, I want to know about timing. I think channel is important. How do consumers access this information? Are they going to brokers or lenders? Are they getting ideas through their junk mail, or their e-mail, or their phone solicitations?

The issue about shopping around is nontrivial, but that is one of the things I want consumers to do. I

want them to compare features -- prepayment penalties, APRs, fees.

But the real question is what do consumers look for versus what should they look for? Again, no disrespect to Mr. Pollock, but we have struggled mightily in the consumer education arena to get people to focus on interest rates and not the low, low monthly payment. Payment is important, but rates are what determine the payment. So, what do they look for? They look for the payment. What should they look for? My answer is they should look for the interest rate. Now, whether or not that is the APR or the contract rate, I don't know.

I want them, in the end, to optimize their financial well-being, and the reason this picture is here is notice that healthy market basket that that woman has. You will notice a lot of my slides have to do with food because food is much more visual than mortgages. But I want them to optimize their financial well-being and security, and that means I want them to be a homeowner, not just a home buyer.

A couple other people today talked about the long-term, being able to stay in your home. Are you going to refinance a couple more times, but stay in the same house? So, I think it is really important that what I want out of mortgage disclosures enable people to be

homeowners, not just home buyers.

The problem for us, as regulators, is how can we simplify an inherently complicated transaction? And this is where I break from the Federal Reserve, so this is just Jeanne Hogarth speaking right now. Is there a way we could think about other models that we could bring to this kind of decision? And I think Dr. Lynch and Dr. Weil did a really good job there of exposing us to some other models.

Can we think about a tier of mortgage products that is analogous to over-the-counter drugs? For example, aspirin; I get a headache, I take an aspirin. Is the 30-year fixed rate mortgage the aspirin of the mortgage market? And then is there a layer of prescription drugs, so that maybe by going to one of Dr. Lynch's "recommendation agents," I can get access to these prescription mortgage products -- that might be a hybrid ARM, it might be something a little bit more sophisticated. But because of somebody helping me analyze my financial situation, I get that recommendation agent to help me through.

And then, finally, is there a tier of controlled substances? And, in my mind, those are perhaps payment option mortgages. Now, I want to say I am not talking about banning anything here. So, this is not like

marijuana where you take it off the market, but you do strictly control access to it.

And I will give you an example of a real estate agent who is a friend of mine from church. You can imagine what her income stream is like over the last couple years. A payment option mortgage would have been perfect for her because she could have kept on making those minimum payments during the low sales months and then added to her payments during the higher sales months. So there is a perfectly good reason for products like that, but it is, for many consumers, in the category of a controlled substance.

So, then, the issue is then where do we draw the line -- what is over-the-counter, what is prescription, what are controlled substances, and are there other models out there that we can draw upon to help us make those definitional terms, those decisions?

What makes a disclosure effective? Well, we know that consumers have to be exposed to it. They have to be aware that it is out there. They have to pay attention to it. They have to understand it. They have to remember it when they need it. And they can use it to act on in making a decision. So, it has to actually provide effective, reasonable information for consumers.

There are some problems. How do we get

consumers to pay attention? We know that consumers pay attention to things that are new, improved, different, novel, and we have talked a little bit about positive versus negative framing here. For example, "you could lose your house if you get this mortgage" versus "this mortgage will enable you to eventually build your credit record so that you can refinance and get a better mortgage."

Also how can we take advantage of learning effects? So, we know consumers are attracted by novelty, but we also know that standardization really helps, and I am glad I am not the first person that is talking about nutrition labels here. I know Susan is the person who really initiated this discussion in helping us think about nutrition labels for financial products. What are the nutrients, if you will, in those financial products? APR, APY, fees and costs, the risks and key features.

And if we are thinking about nutrition labels for financial products, I would sort of challenge us to think not only about mortgages, but also credit cards, savings accounts, retirement annuities, life insurance products, mutual funds. Think about consumers; they buy snack foods and sodas and green beans and whole wheat bread and oranges and every one -- except for maybe the oranges -- every one of those has a nutrition label on it.

So, even the junk food as well as the nutritional food has those nutrition labels. We want to think about financial product labels across the range of financial products that consumers interact with in order to get the most effect out of the learning effects.

Plain language in disclosures is necessary but it is certainly not sufficient. We need more than plain language. We have to frame the disclosure in the context, and we have talked about opt-in versus opt-out. We have seen Dick Thaler's "Nudge." We know that defaults are important, and I have to mention Jan's "is it a fee or a discount fee?" It is a classic problem.

And then there is the issue of looking at the little parts but also looking at the whole, and I know Susan is going to talk about that. But the whole in disclosures really is more than just the sum of its parts. And, so, there is this organizational structure I think we have to grapple with in disclosures.

I told you this is going to be more questions than answers. How do consumers process that information? And, boy, you know, Dr. Weil and Dr. Lynch really helped us, titillated us a little bit with that. What is in it for me? Am I a person who looks at fees or APR or monthly payment? What is it for me?

I would finally like to close with saying that

disclosures are an important tool, but financial products have become much more complex. Not all problems can be solved by disclosures. Just because you have a hammer does not mean that every problem is a nail.

I think we have to look at our toolbox. I think that disclosures are important, but we need education; we also need access to counseling and coaching and advice, those recommendation agents. I think we have to think about policy and regulation and substantive prohibition. The Fed now has proposals out for comment that would, in fact, make some substantive prohibitions in the mortgage arena as well as in the credit card arena. And I think that that is an okay thing sometimes.

Sometimes controlled substances do need to be removed from the marketplace. We need more than just prescriptions.

The other thing I would ask us to consider is how big of a toolbox do we really, really need. I mean, is it the toolbox stack-on or is it the gigantic Sears Craftsman? Because there are different audiences, there are different topics, there are different stages of behavior change for consumers and there are different learning styles. Some people are visual or auditory learners. I would challenge us to think about how do you make an audio disclosure, how do you make a video

disclosure? Could you put a disclosure on YouTube? I do not know.

And then, finally, where do we go from here? Where can we draw the disclosure policy lines? What content do we consider really essential? What is really too complicated for most consumers and, therefore, what ought the defaults be? How do we make sure we are getting through to consumers? And, finally, are there other models that we could be testing?

So, I have not answered any questions; I have probably put more questions on the table. But I would hope that in our discussion and as you go home and wend your way back to your loved ones this weekend, you think about some of these things because they are the things that are certainly on my mind. Thank you.

(Applause.)

MR. LEARY: Thank you, Jeanne.

Our next speaker is Vanessa Perry. She is an Assistant Professor of Marketing at George Washington University and she does research on financial literacy and financial decision-making. Prior to joining George Washington, she was a senior economist at Freddie Mac.

MS. PERRY: Well, good afternoon. I too am delighted to be here and really want to compliment Jan and Jim for organizing a really, really powerful set of

sessions. I have learned a great deal since I have been here today.

I want to share something with you that is based on research with a co-author, although it is actually not a paper, which is why her name does not appear. But many of these ideas were developed by Carol Motley, who is now at Florida A&M, and she is actually the advertising expert. My background is in mortgage markets, consumer credit decisions. And, so, I have learned a great deal from her about advertising throughout this research.

A couple things I would like to emphasize. First, there are a wide variety of influences on consumer borrowing decisions and, so, there has been a big discussion about disclosures and education in an earlier session and discussion about advertising. But I think it is important for us to really think about the fact that consumers are reacting to information from a wide variety of sources. Disclosures are important, but what we know from research and consumer decision-making and consumer psychology is what they knew in advance of the decision, prior knowledge, sources of information and the informational environment, that is context, plays an important role in these decisions as well.

In particular, previous research on consumers' decision-making suggests that the big picture is at least

as important as what is in the fine print. And, so, I think it might be useful for us to think about some of these big picture issues that consumers, real consumers face. By "big picture," I am talking about the decision that people actually come to the tables focused on.

So, those decisions include thinking about the new house or thinking about the new kitchen or perhaps, in the subprime context, thinking about other debt burdens that many consumers actually struggle with. And these issues provide a sort of frame or context for the choice of a loan product. And, so, I think that it is important for us to keep that in mind.

Here is a quote from the FTC: "misleading mortgage advertising depends upon exactly what they say, how they say it, how big and how bold things are titled, what they try to hide in the small print." I love this quote. But this quote really focuses a lot on advertising that is sort of defective in nature. What I think is interesting is sort of how they say it because that speaks to the way information and the problem gets framed for consumers as they go into a situation where they are choosing a loan.

So, the question is how do consumers interpret advertising message content? And while some of that I cannot answer for you, I hope to, at least, demonstrate

what we mean when we talk about the effects of framing.

So, we know from previous research, prospect theory, someone won a Nobel prize for that, that the decisions depend on the way that they are framed and the language that is used. And, for example, in a very widely cited study, consumers actually prefer packages that say that beef is 75 percent lean to packages that say beef is 25 percent fat, even though it actually is the same underlying information, but it comes down to a matter of framing. We know from this stream of research that negatively framed information actually attracts more attention and it is also more heavily weighted in consumer decisions in that there have been a number of studies over time that have shown that.

We also know from another stream of literature that when information is too negative, that is, it starts to scare people, that may result in some impaired decision-making, that is on people that are exposed to fear appeals and advertising, actually start looking for ways to cope with the problems rather than actually to attend to the informational content that is presented in an advertising message. And, so, there is such a thing as presenting information too negatively for consumers to aid in their decision-making.

So, according to a study, a very recent study of

print, TV, radio and Internet advertisements promoting home mortgage products in 95 markets, actually these data were collected from the year 2004 to the end of 2007, we found the following patterns in the messages simply by analyzing the content of the advertising messages. Ads for prime mortgage products tend to emphasize the American dream, the American dream of home ownership, and they also tend to emphasize lower rates and tend to go into detail about the terms of the loans, the terms and the exceptions. So, this is where we get fine print.

On the other hand, ads for subprime mortgages, and I wish I had time to change this to non-prime for today's presentation since that is what everybody else is using, these often scare consumers because they use basically prime or emphasize the debt problems and burdens and possible rejections that they might face in the mortgage origination process.

So, let me show you some examples and also mention that in these subprime market ads, it is extremely rare, extraordinarily rare, I cannot think of a word that is more extreme than that, to see loan terms or exceptions presented at all.

So, here is an example of how some of these dream messages manifest themselves. What is the American dream? We do not only approve loans, we finance dreams.

One simple call will make your dream come true. So, these messages provide a very positive frame that help a consumer form an emotional bond, almost, by linking the loan product and the lender with this American dream. The safety, the sense of security, et cetera.

Many of the subprime slogans and tag lines evoke anxiety or fear among consumers, and you can tell that they are intended to do so. Here is one: "My bills were keeping me up at night, I just lie there worrying. I found help at Home Equity Mortgage. They helped me to consolidate my debt into one manageable monthly payment." Again, this is very negative. There is nothing dreamy about that particular message.

Other ads stress building a relationship between the consumer and lender built upon trust. Well, if you have scared someone and convince them that they need help, of course, it is probably a lot easier to persuade them into getting help from that particular lending institution. "Let us fix your broken ARM." I like that, that is kind of catchy.

Here is a print ad which very much emphasizes this dream theme that we are talking about. And, actually, the bottom is cut off, but there is the fine print there in extraordinary detail about what your credit score needed to be in order to qualify for the loan, et

cetera, et cetera.

Here is a sort of subprime counterpart. Here is a guy saying, we are here to help you. "Worried about your ARM, save a leg, call today." Now, I purposely picked one of the cheesier ad examples to prove my point. But here is a very sort of negative approach. Again, negative information carries more weight, but could actually discourage consumers from seeking the kind of specific information they need to make an informed choice.

"Many of you with adjustable rate mortgages are confused or anxious but you are not alone." Wow, that is uplifting. Yet, this sort of positively framed counterpart, here is a rate alert for June 2007: "slower economic growth has caused the Fed to keep interest rates flat and the market has responded with some of the lowest mortgage rates in years." It is not the case that a borrower in a subprime kind of market would not be able to benefit from that same situation. Yet those are not the kind of messages that you see in those ads.

So, the big picture and the fine print. Bottom line shows -- we know that previous research shows us decisions depend on the way they are framed, the kind of language that is used, the context that Jeanne talked about, that John Lynch talked about in his comments. We also know that negatively framed information carries more

weight, but it can reduce decision quality. And that is important when we are trying to encourage people to shop around and make informed decisions.

This issue also applies to disclosure content, which is something, again, that Jeanne mentioned in her presentation. And, finally, I want to point out the importance, the critical importance of consumer research, not just my research, but others, there are many others who have a great deal of experience in actually understanding or informing the research and policy community about how consumers use information in decision-making, and I think that that is really, really important. We can no longer sit in a room and make assumptions about what it is consumers do.

With that, I will turn it over to Susan. Thank you very much.

(Applause.)

MR. LEARY: Our next speaker is Susan Kleimann. She is president of Kleimann Communication Group and an internationally recognized plain language expert. She has consulted on document and form design for a number of federal agencies and others, I expect.

MS. KLEIMANN: Again, I am very happy to be here and thanks, once again, to Jan and Jim and Micah who have been so great at helping us get through this.

I too want to begin with the disclaimer that I am not talking for any of the different agencies that we work with. These are our own opinions and much of it is research that has been sponsored by different agencies, but I think has gotten us to some very interesting places.

I am also not a mortgage expert. So, I will join the ranks of all the disclaimers that were made there.

As a personal place to begin, you know, I do want to say I do think disclosures can work, and I do think that disclosures can make a difference to consumers in terms of their behaviors, but that does not mean that the disclosures we currently have are doing that. So, part of what I have been asked to talk about today was really, how do we help an organization communicate really clearly, accurately and with great intent, and what is the process that we have to put into place within that kind of an organization in order to achieve that type of goal?

Markets are filled with illusion all of the time, and it is because we have good people with good intent attempting to communicate very complicated information and wanting to communicate it and wanting to do a good job. But it is not that easy. And I think that we heard at the end of the last series of panels, or the last panel, the question of what is a disclosure document,

and I think that is a fundamental question that we really do have to be thinking about because we are all over the place on this. Some of us want it to educate, some of us want it to warn, some of us want it to inform.

But we have to be able to think about it and really come to some conclusion, at least, in each disclosure what our intent is going to be, because I do think that this picture illustrates something about disclosure documents and that is that for consumers that is the only way they see the policy. They do not see it written up in a law. They do not see it written up in policies and procedures. They see it in that disclosure document that comes to them and they do see it as a trust relationship between them and whoever is disclosing to them, and it is a fragile relationship and one that can be easily broken.

And when we start thinking about what are we trying to do in some of these disclosures and we try to think about what is the effect of plain language or clear disclosures, one of them has to deal with what is the relationship of the consumer's perception of trust with that organization. And I do not think we want to undersell or under-think about that kind of an idea.

So, part of what we are thinking about is how do we translate this information. So, I think confusing is

easy, it just surrounds us -- every time we turn around we have it.

(Laughter.)

MS. KLEIMANN: Unclear is relatively easy. This is an IRS form that is sent out to roughly three million people a year. Again, this is easy. Dense is easy. Garbled is easy. Notice I chose somebody I was sure would not be here.

(Laughter.)

MS. KLEIMANN: Neat and tidy, but still fundamentally unclear is easy. They can make it look good, but making it look good is not what we are really talking about. Short can be easy. Layout is easy. But simple, easy-to-read, visually compelling neutral, which I believe is one of our key elements, understandable and clear -- that is not so easy. And it is possible to get disclosures that work better, that really move from the idea of data to information to knowledge or stuff to stuff to action.

It seems to me that is where we are trying to go with this and, ultimately, the choice is going to be the consumer. Give them the information so they can make a choice. Because they are not going to make the choices we want them to make all the time. They will make choices based on their own value system, on their own things that

they care about and they will not necessarily match ours. That is perhaps a different task.

So, it is not easy. But it is possible. And I will come back to some of these just to look at what are the elements in some of these that made them easier and allowed us to actually get documentation, data that shows consumers are processing these and they are affecting their decisions in very measurable ways.

So, the question is going to be how are we going to do this, how do we get disclosures that do work? And, again, I want to remind you, I am talking about assuming the best of intent because it is so complicated to do, that if we start adding in that somebody is intentionally trying to mislead, we are in a whole different world and I have to simplify my world, too. So, I am going to assume good intent.

You have seen this, lurking in there is that definition of insanity. And really the idea that we do know how to create disclosures, we just do not do it very well right now. So, what is it that we are going to have to do that really allows us to create disclosures that are different, that are more effective? And I am going to suggest that if we want to get to, to follow up on that baseball metaphor we had earlier, the little sweet spot of a disclosure, a really good disclosure, we need to think

about these three elements.

And I am going to be talking very quickly now. So, first, collaborate. We have to build the right team. No lawyer, economist, consumer advocate, industry group, consumer or even consultant can get it right on their own. We have to build that mixture of expertise if we really, really want to get it. If we do not do it at the beginning, we will be doing it in the review cycle. And I have lots of things on review cycles that we will show you, not a good place to do it. We can build a collaborative team up-front.

Clarity. What is the purpose of this? Again, are we educating? Are we informing? Are we helping them shop? Are we trying to warn them? There is only one thing we can be absolutely sure that is not a disclosure's purpose and that is to tell the consumer everything and believe that you have now communicated. That is not going to work. But trying to decide what is critical is going to be important. We have to decide on what the desired action for the document is because until we know what we want the consumer to do with this information, we are going to be muddling around all over the place -- let's add this, let's add this, et cetera.

Once we know what we are trying to get the consumer to do, from all of that will come all the details

we should include, what we should exclude, how to present it, what to emphasize, what to design even, because then we have a clarity around our purpose.

We have to commit. We must use a rigorous process. And that is going to include consumer testing. This process is about creating hypotheses and then going out to consumers collecting data that shows us we got it right, unlikely, we got it closer, quite likely, until we are close enough that we think we have a disclosure that does no harm and, in fact, leads us to be able to do the kinds of things that we want it to do. We have to build these on consumers' needs, not on our policy needs of what it is we want to tell them. We have to be thinking from the consumers and we have to blast our own assumptions such as what does policy mean because consumers do not think of policy in the same way we do.

We have to innovate. I do not know if you are familiar with the National Assessment of Adult Literacy. This is a definition of a high level of literacy: "reading lengthy, complex abstract prose/text as well as synthesizing information and making complex inferences." I think that is what most of our disclosures ask consumers to do. Only 13 percent of the U.S. population, adult population, is capable, scores at that level. That gives us a whole lot of people who are not there right now and

we do have to think about disclosures that can do something different. We have to innovate.

What Jeanne was talking about, thinking about different models, we have to think about that whole-to-part, not just what is a little bit that we can tell consumers, but how do they see it integrated, the context, visual, keeping it simple. We have to go for neutral, giving them the information clearly, but respecting what it is that they will do. And we can have results.

This is that IRS form. The original message says we are proposing a change to your 2002 tax return. That simple message change resulted in a 227 percent increase in the responses that they got. Consumers got it. They knew how to take an action on it.

It could be something like this where consumers, this is out of the proposed good faith estimate. With those three choices in number two, there was great concern about neutrality from mortgage brokers that consumers would see the disclosure of the YSP and that that would immediately make them flee. In one of our rounds of testing when the broker cost was lower, 92 percent identified it as lower and 87 percent chose it. When the lender cost was lower, 92 percent identified it as lower and 89 percent chose it. That is close enough. We are not introducing bias here and, again, we do not care. We,

KCG, do not care [which they choose].

In this one, whole-to-part, again, consumers can see, they can understand, here is all the range of possibilities, and here is what this bank does. Not here is what we do. Because unless you have the context of the larger picture, you are not going to be able to understand what is really going on here.

What is the impact of this type of approach? We can have understanding, we can have clarity, we can have trust, a sense of honesty and even simplicity, and it seems to me that that is exactly what it is we are trying to gain when we put together disclosures for consumers. Thanks.

(Applause.)

MR. LEARY: Thank you, Susan. Next up is Annamaria Lusardi. She is Professor of Economics at Dartmouth College and a Research Associate at NBER. Some of her main areas of research include savings, financial literacy, and financial decision-making.

MS. LUSARDI: Thank you very much. Thank you, Jan, for inviting me to the Federal Trade Commission and for organizing this important conference.

What I would like to do today is document the state of financial literacy, and I am going to do it by actually taking you through a tour of several studies I

have done in a span of several years and, actually, to document what is the barrier we face when we are really considering information or informing the consumer and making a disclosure.

This is clearly an important topic. I used to have to justify this when I started working on financial literacy many years ago, and now I do not have to spend as much time doing that. But let me actually describe that when we first started this project and we proposed a module on literacy for the (inaudible) retirement study -- and we started this around 2002 -- we actually had to think about the question, but what is it the consumer needs to know when we are asking, you know, what is the financial literacy? Do they need to know the black shoal formulas given that there are several instruments which require option pricing to be fully appreciated or do they need something simpler?

Since we did not have a lot of room for questions, only three, we went actually for some of the basic concepts such as numeracy, can people do calculations. In financial decisions, you have to make calculations. And we went for the basic and fundamental concept like inflation and risk diversification. And I actually want to show you the exact question because I want first to document how simple these questions are and

also because this question now has been inserted in several -- actually more than ten surveys now -- both in the U.S. and abroad. So, we will be able eventually to do some international comparisons.

So, here is the wording of the question we put in the (inaudible) retirement study. Suppose you had $100 in a savings account and the interest rate was two percent per year. After five years, how much would you have in the account if you left the money to grow? This is actually a phone interview. Usually the person who asks does not have an Italian accent, so the question would be very clear to them and also release the questions. Of course, you also need to leave people to say I do not know or I refuse to answer.

The second question which is about inflation is equally simple, at least for economists, perhaps, and we ask, imagine that the interest rate on your savings account was 1 percent per year, the inflation was 2 percent. After one year would you be able to buy with the money more than today, exactly the same or less than today?

And, third, we ask about risk diversification. Some of these questions -- and this particular one was actually taken from a survey done at the vanguard. And we ask, "Do you think the following statement is true or

false: buying a single company stock usually provides a safer return than a stock mutual fund." We do not ask people only to do calculation, but we also ask for some concept, and we also tried to assess financial knowledge. But as you can imagine, we are picking up a variety of things, something I will come back to in a moment.

So, let me turn to the results, and this is actually a sample of people which are 50 and older. This is the (inaudible) retirement study. And as you can see, a lot of people really cannot make very simple calculations; in fact, 22 percent of people 50 or over, who probably a lot of financial instruments, got this question wrong.

They do better on inflation, but actually if you look at the proportion of people who answered correctly to these two simple questions, only 50 percent of the sample did. The third question is the one where the people had the most difficulty and, in fact, more than a third said, "I do not know the answer to this question."

Not only is literacy widespread, but it is particularly severe among some specific groups, and these groups are not small. Actually, one group which is remarkable, and we find this in every survey we have done, is that women know substantially less than men. You can see here the results, a 10 percentage point difference in

the correct responses.

We also see a very sharp decline of literacy and knowledge with age, or at least with generation, and as you can see here, as people age, the share of correct responses actually falls quite substantially.

You might think that we got these responses because we are mostly interviewing grandpa, but actually we have looked at this question for people which are 51 to 56. So, they are really in their prime years, and these are actually the early baby boomer. We did not devise the questions, but I think these questions are pretty important because they, again, get at the capacity of people to do some analytical thinking and also to do some calculation. Again, the question, you know, can you calculate 10 percent. If the chance of getting a disease is 10 percent, how many people out of 1,000 would you expect to get a disease? If five people have the winning number in the lottery and the price is two million, how much would they get?

And then, actually, another question which has, again, to do about interest compounding, which I think is really fundamental, when we speak about that is, let's say you have $200 in a savings account, the account earns 10 percent, how much would you have at the end of two years?

Since actually we are in Washington, I actually

thought that I should report another question which is asked in this survey which is, of course, important for taxes, and I will call it political literacy: "Who is the President and the Vice President of the U.S.?" And I thought we should provide two smiling pictures and, actually, I want to show you that even in this question not just people do not do very well on calculations, but 20 percent do not know about the President and the Vice President of the U.S.

So, we are up against tough obstacles here. Financial literacy should not be taken for granted. But also, it is something that was also emphasized this morning. Financial literacy is not just widespread, it is particularly severe in some demographic groups, and that is why the idea of this education, which has a one-size-fits-all, I think is potentially ineffective because different groups have really different needs. I think it is important to highlight these differences as well.

I also want to show that financial illiteracy is so severe that some of the programs we have seen so far in my view are very much equivalent to giving an aspirin to some people who have pneumonia. If the person does not get better, it does not mean that conventional medicine does not work.

The most important question is, of course, not just whether people know, but whether knowledge matters. So, we spent a lot of time -- and this is actually the difficult part of our paper, the first was kind of fun, the second one is way more difficult and more challenging. It is to show whether or not financial literacy matters. And what we show in several other papers, and this is a lot of collaborative work with a variety of collaborators, is that actually financial literacy does matter, and I think matters quite a bit. People who are less literate are less likely to plan for retirement, less likely to accumulate wealth, and less likely to participate in the stock market.

But since the conference is about that, actually, let me turn to that now, and this is actually the project I have been doing this term at Harvard Business School. It is a project with Peter Tufano where we were able to devise questions for a representative sample now of the U.S. households.

So, I can show you now a figure which is representative, and it is a really great advantage and a great opportunity to be able to devise these questions. We were very fortunate, and Peter has been brilliant, in being able to partner with his market research firm, which has allowed us to put these questions -- and I have to add

for free -- and not only were we able to do this and add a variety of questions about credit and borrowing behavior, but we also got the data very quickly, which hardly happens when you put this question in a national survey. You know, we devised the question previously in 2002, got the data in 2005, published the paper in 2010. So, you know, it is not that fun.

(Laughter.)

MS. LUSARDI: So, what we do here, we have actually added a variety of questions, including mortgages, not subprime mortgages. This is a representative sample, so we would not have a large group for that.

But I want to focus, again, on the questions about interest compounding which we were able to now devise, I think, in a more elegant way. So, the question we ask is, "Suppose you have $1,000 on your credit card, the interest rate you are charged is 20 percent compounded annually. If you did not pay anything off, how many years would it take for the amount you owe to double?" And we have also listed the question so we can see whether people underestimate or overestimate the power of interest compounding. And, also, we can rank, in a sense, how wrong you are on this answer, and we can use that type of information.

And I think there are actually several important findings. This is actually a sample representative of the population. So, what you can see here is in the population, only 36 percent got this question right. And, in addition, like almost -- and more than 30 percent actually underestimate the number of years it takes for the amount to double. So, we have more error on the overestimate side than the underestimate. But the other, and I think, equally worrisome figure, is the percentage of people who simply say, "I do not know the answer to this question."

We then add another question, which I think is particularly important as you talk of mortgages, and we actually ask people to compare two methods of payment both to see whether they are financially savvy and can calculate, but also to see whether or how much they are attracted by this constant stream of payments that are offered. And, again, we were talking earlier about the fact that people might actually look at the payment per se or prefer to add the payment rather than the interest rate.

So, we actually ask, again, "You purchase an appliance, it costs $1,000, to pay for this appliance you are given two options. Pay 12 installments or borrow at a 20 percent annual interest rate." So, this is clearly a

tricky question, and I know it is tricky because only six percent actually got it, and it is interesting to see that not only a lot of people chose option A, but also many thought that these options were the same. So, basically, they are not really considering or not doing any discounting.

We actually then link this information to that. That information about whether people had too much debt, just the right amount of debt and they have difficulties paying it, or just they do not know. And in the sample, 26 percent of the population say they have too much debt, and a good 11 percent simply they do not know the amount of debt they have. But what we can do? We can actually link mistakes to basically adding too much debt.

So, it is really the people who grossly underestimate interest compounding which end up with too much debt and those that were given a free loan (inaudible) which end up with too much debt.

So, let me say very briefly since this is actually what perhaps I should have been talking about, that there are, of course, a lot of ways to help consumers. I actually just want to briefly talk about this idea of a financial driving license, just very briefly. This is actually a paper I wrote with Alberto Lisina (phonetic) at Harvard a couple of years ago. And

both being Italian drivers, we were struck by how much we accept restriction in an area and perhaps how little we are sensitive to restriction in another. You know, what I think might just be important here is to think about the fact that, you know, accidents can happen, of course.

And the idea that you do not require even a minimum amount before you let people on the road has the potential, of course, of creating so many accidents that the roads might be closed down down the road, and so we might actually have to think a little bit about the risk. And, of course, I am talking about externalities here, and the fact that if people have no information and perhaps no literacy, the potential for making mistakes are, of course, high.

But I also actually want to speak about the financial driving license because not actually to necessarily have this mandatory financial literacy, but to also think about the fact that we have to devise a financial driving license, we would have to think really hard about, first of all, what people need to know. Second, we would actually have to write a financial literacy manual that actually described what people have to read so that we would have people not browse 2,000 webpages or a lot of books in the bookstore where, you know, we do not know whether they are right or wrong.

I think that really making progress on this topic certainly requires collaboration, and I am very glad that the conference as well really has a variety of speakers from different fields, and I think this is actually very important. We can learn a lot not just from the economics, but, for example, another field where we actually know a lot more about how to persuade consumers. And just to tell you that I am still not giving up on financial location, I have just finished editing a book, which is titled, "How to Increase the Effectiveness of Financial Location and Savings Programs." It is out in the fall and I hope you will find it of interest.

(Applause.)

MR. LEARY: Thank you. Our next speaker is Sumit Agarwal. He is an economist at the Chicago Fed and he also has a background in industry. Before joining the Chicago Fed, he was at Bank of America where he worked on risk management. And I am sure it is not his fault what is going on now.

(Laughter.)

MR. AGARWAL: I would also like to thank Jan and Jim for organizing the conference.

So, I am going to talk about credit counseling and home ownership. This is joint work with Gene Amromin, Zahi Ben-David, and Doug Evanoff. As all Fed

employees, I should point out the disclaimer, these are my opinions, not of the Federal Reserve System or the Federal Reserve Bank of Chicago.

So, I am going to talk about two polar opposites. Credit counseling programs. The first one in Cook County, Illinois, and the second one in Indianapolis, Indiana. So, let me kind of set them up. The first one, after all these anti-predatory lending laws were implemented across various states in the 1990s and 2000, Illinois lawmakers also implemented an anti-predatory lending law, which had a pilot program implemented across 10 zip codes in Cook County.

So, I should say we intend to study -- we have collected a whole lot of data, we have not yet got to actually running the regressions and giving you some results. I might give you some preliminary results which I have. With the cameras here, I am a little reluctant to show you. They could be proven wrong later.

So, we want to study the impact of this counseling on home ownership across the zip codes, and we want to compare them to the neighboring zip codes. We also want to study what happened to credit supply pricing and the default behavior of these borrowers compared to the people who were not treated.

The second experiment was in Indianapolis where

the Indianapolis Neighborhood Housing Partnership actually helps underprivileged households get home ownership. So, here we want to study, again, the impact of the financial management classes and the subsequent home ownership experience of these clients. We also want to study the people who actually dropped out of these classes and see what happened to them. And then we want to track the performance of these graduates, about whom we have already collected performance data.

Finally, we are working with the organization to actually conduct randomized trials and follow-up surveys to ask both the dropouts and the actual graduates on what have they learned, how are they managing credit cards and other mortgage payments.

So, let me kind of get into both these studies to describe how they are -- as I said, they are polar opposites -- actually how both these credit counseling programs are implemented. In the Illinois program, it was mandatory. It was loan counseling mandatory for these ten zip codes. It applied regardless of the loan product. I mean, earlier in the day we were taking about various loan products. Here it did not matter. If your FICO score was below 620, you had to go through this one hour of credit counseling. If your score was between 620 to 650, then the counseling was conditioned if you had an interest-

only, low doc, or the exploding ARMs and various criteria, especially if the points and fees were greater than 5 percent of the loan amount. But if your FICO score was above 650, you did not need to go through credit counseling.

Again, this is important because this is in stark contrast with all the other legislations that were passed by other states because those depended on the loan product itself. This is, in a way, unique on how they implemented this.

Also, there are lots of other messy issues with how this program in Illinois was implemented. First, it was this zip code selection. It was this contiguous block of south side zip codes in Chicago. The contract enforcement, there was no good faith provision -- if there was a mistake made by the HUD approved counselors and the lender actually approved the loan and there was a mistake, then they could not foreclose on the house. So, there were no provisions for the lenders to back out. So, this had credit supply concerns.

There was also asymmetric treatment of these lenders. It only applied to the state licensed mortgage brokers and banks and not to national banks, credit unions, and others. So, effectively, we can actually study who actually left the areas in supplying credit.

Now, what the counselors were actually doing in this one-hour session, they would ask them, why do you want the loan, what we are doing. And they could give any of these recommendations: borrower does not understand cost, borrower does not understand the transaction. And they would give a certification that says the borrower is denied and should not get the loan. They could still go and get the loan even after the HUD certification came back they should not be getting the loan. But loan rate is above market rate, so all those were the various options that the credit counseling would provide them.

Now, what we expect out of this is that credit supply should dry out. I mean, there were highly publicized withdrawals from these 10 zip codes of lenders. Lenders claimed this would raise cost from ensuring compliance of these counseling programs. There were also these legal uncertainties because data entry could invalidate all these contracts as I mentioned a minute ago.

Just preliminary evidence suggests that there was this shrinking of credit supply. Twenty-eight percent of supply shrunk.

So, there was also this outcry by various groups. Borrowers and selectors in these affected zip codes were saying “why us,” especially the sellers. There

was this higher lock-in cost, and fewer lenders were there. Mortgage brokers and real estate agents also were not happy with this. Outside parties, I mean, minority groups -- everybody was thinking this was discriminatory because once they could not sell their properties, it had an adverse effect on people who were buying it as well. And this also had impacts on the house prices and sale volume. Both declined disproportionately in this community.

So, we want to look a little bit beyond just that these -- some of these statistics. We want to actually get into the details of these loan contracts because what we have is actually extensive data of the people who were treated and people outside the neighborhood who were not treated, outside these ten zip codes. So, we only access what happened to accepted loan contracts, especially things like interest rates and prepayment penalties. Were they paying higher or lower prepayment penalties compared to the zip codes outside because now they have been through this credit counseling.

We also want to look at what happened to foreclosures and delinquency rates of the people who went through the credit counseling. Did it effectively change the borrower pools in this -- because credit worthiness, now all of a sudden you are only getting higher FICO score

borrowers who are taking out loans.

Time on the market. Because half the people now have to go through credit counseling, this could delay them buying the house. Did that affect time on the market and also prices? Did it also shift lender composition in some sense?

We are also working with them to actually collect the actual counseling data to see if we can look at who was rejected and can we look at why they were rejected for the loans.

Now, a very simple analysis of what we have done is looking at the zip codes that were treated versus the control zip codes, what we found is interest rates are lower for borrowers who had below 80 percent leverage in the treated group or in these ten zip codes.

Again, I would rather maybe just skip these because we just ran these regressions yesterday.

(Laughter.)

MR. AGARWAL: So, they are really fresh. Tomorrow they might change.

(Laughter.)

MR. AGARWAL: So, let me kind of talk a little bit about this second program that was by this Indianapolis Neighborhood Housing Partnership, which is a nonprofit providing financial education to

underprivileged. And it is completely unlike this Illinois experiment here because it is voluntary and people walk in.

And they actually followed these people for many years. I mean, what happens is -- I will get to that in the next page -- but what we wanted to do was collect all this data on their credit histories when they walked in, their financial and socioeconomic data once they enrolled in this program, look at the performance and outcome after this counseling program, and after graduation of this program, at how long they have been in the house that day.

So, what happens is when they actually enrolled, the home buyers' education program offers a series of individual appointments where a counselor actually sits down and provides financial advice. They talk about things like budgeting, debt reduction, credit scoring improvements so that they can pay down some of their credit card debt, consolidating credit card debt to potentially affect or improve their FICO scores eventually so that they can buy a house.

At the end of the program, which can last all the way to two years, again, the counselors sit down with them for an eight-hour class and kind of prep them on how they should go out and buy a house. In between every month, they meet with the counselor for a two-hour class,

looking at the performance of their first class, how well have they been able to cut down on credit cards, credit card debt, and how their FICO score is doing. So, they have been able to collect a lot of this data on the initial FICO score that was recorded, the final FICO score when they bought the house, the people who dropped out, the demographics of a lot of the people who dropped out and who stayed in the program and, obviously, we know a lot of the data from data sets of the people who did not actually participate at all in this program. So, we want to actually compare and contrast these.

Just to kind of give you some summary steps -- who was in this program, who actually even took advantage of this. Mostly minorities, low to moderate income families, 59 percent are African Americans, 79 percent of the people who actually took advantage of the program were females. Again, about 50 percent are between ages 30 and 50. What is striking is 32 percent actually have no high school education, or a high school education or less. And 43 percent have income which is below $24,000. So, just to look at it in 2007, they actually graduated 1,100 families and 303 of those actually closed on a home loan. So, we are looking at the data for five to six years, so it is quite a large sample to study how these consumers were doing. So, here what we are trying to measure is the

magnitude and the longevity of the effects of financial education. Did they just get into home ownership? After six months, did they actually end up defaulting or was their home is foreclosed upon, or are there long-lasting impacts of this financial education?

I mean, this is a self-selected group. Whoever graduates, I would expect they should do well. So, the hurdle is a little higher for us to see the comparison group. If they did not go look at the zip codes, they did not go through this program, how did they do compared to these people who self-selected themselves into this program?

We also want to look -- again, match this to loan performance data from McDash and look at these other comparable houses or families. We are also conducting follow-up surveys with these people to understand how well they understood financial education. The follow-up surveys, in effect, will allow us to control for lots of demographics and negative shots that might have made them get out of the house or get foreclosed upon.

So, preliminaries, though, suggest just of the people who are in the program and who graduated from this program, that their FICO scores actually went up by more than 20 points. There was an increase in savings -- these are numbers of around $300. And a decrease in debt --

that's more important -- of $550.

What we also see is their borrowing power went up because when they went out to get the mortgage loan, their interest rate was reduced because of the increase in FICO score and other characteristics. We also see a slight decrease in defaults and foreclosures.

I think that is all I have. So, we are still studying this. But we want to study and compare and contrast these two approaches.

(Applause.)

MR. LEARY: Thank you, Sumit. Our final speaker of the day -- well, our final speaker on this panel, at least, is Susan Woodward. She is the founder and chairman of Sand Hill Econometrics. She has extensive background in both academia and government, and she is also the author of the just-released HUD study on closing costs of FHA mortgages.

MS. WOODWARD: Patterns of price discrimination on the FHA mortgage market. Now, the main issue and agenda here is, again, about disclosure, and what this study speaks to is what the benefits of disclosure might be if the worst informed people who actually get a mortgage were as well informed as the best informed people who actually get a mortgage.

Now, I had lots of help, and I needed a great

deal of help, I certainly could not have done this study by myself. The study just became live on the HUD website, this is the URL for it. It is not for today, it is for future reference.

The data we began with was for about 7,500 FHA insured loans. They are all 30-year fixed-rate purchase loans. All FHA insured, no ARMs, no refis. They were all originated in the same six-week period in May to June of 2001, a period that was blessedly free of interest rate fluctuations, and that was part of the reason why we chose that period.

The data that we collected for these loans was from the HUD-1 settlement statements, which FHA has for every loan that it insures; the FHA electronic records, which gave us superior information about the borrowers and their addresses and the interest rates on the loans and the amounts of the loans; census data for each borrower census tract; and then HMDA data, which is related to census tract also but is specifically addressing loan applications, rejections, approvals, and originations.

So, the first thing we learned is that the aggregate numbers are themselves interesting. Closing costs are not small. On loans averaging about $105,000, the total lender broker fees averaged about $3,400 and that broke down to about $1,500 in up-front cash and

$1,900 in yield spread premium.

Now, the way we came about these yield spread premiums was that the brokered loans were reported; in fact, the only way we could identify the brokered loans was that a YSP was reported. Then we used the relationship between interest rate and yield spread premium for the brokered loans to estimate yield spread premiums for the rest of the loans. The standard deviation is big, about $2,000 around that mean of $3,400.

Title fees on these loans, and this is all payments to the title company because it is very difficult to break out pure insurance from everything else, averaged about $1,200 with a standard deviation of $600.

We find that price discrimination is substantial. First, by education. Borrowers with a college education pay about $1,100 less, other things equal -- other things being loan amount, credit score, house value, income, et cetera -- than borrowers without a college education. And, of course, we are measuring education here at the census tract level. So, what we are really observing is the fraction of adults in the census tract that have a college education not the education of the individual borrower, and those of who have studied too much econometrics probably know that when you measure a variable with error, you are likely to get a coefficient

that is biased downward. So, that $1,100 might be too small.

But it is also consistent, I will point out, with the similar measure I got for educational differences in a single lender set of data that I studied prior to the time when I studied this data.

There is also some price discrimination by race; the minority borrowers pay roughly $350 to $400 more than non-minority borrowers, notably smaller than the education coefficient.

Now, we also looked at complexities in the loans and how the borrowers did in dealing with these complexities. One question, of course, was the yield spread premium because anybody who has been paying attention to the mortgage market knows that there has been a lot of litigation over yield spread premiums over the last five years, that yield spread premiums have been alleged in some camps to be illegal kickbacks under RESPA, and in some of the studies it looks like borrowers get substantial benefits from the yield spread premium. I am thinking, in particular, of the single lender data that I looked at five years ago, which included not just FHA insured loans but also conventional and jumbo loans.

But in the FHA data, we do not find very much benefit. For each hundred dollars that borrowers pay in a

yield spread premium, which is implicitly paid by the borrower but explicitly paid by the wholesale lender to the mortgage broker, the up-front saving to the borrower is only about $20. So, the idea is the borrower pays a higher interest rate. Because the borrower pays a higher interest rate, the wholesale lender makes a payment to the mortgage broker.

Now, in principal, there could be a one-for-one trade-off here. You could see the borrowers paying $100 less in up-front cash for their $100 of additional present value coming from the higher interest rate or you could see something else. What we see is a trade-off that is far different from the one-for-one trade-off that would be ideal, what you would expect in a competitive and transparent market. This market is not very transparent; the borrowers are getting a benefit of about $20 for each $100 that they pay in YSP.

Same thing with points paid on a mortgage. I think there is probably only a handful of people in the world who really understand what points are on mortgages and I think they are all economists who study the mortgage market. And here, again, the average present value of benefits was for each $100 in points paid the -- and this is cash in exchange for a lower interest rate -- the amount by which the interest rate was lowered had a

present value of about $20.

Now, another one is seller contribution. Now, you would think this one would be easier because this one is not logarithms and exponents -- this one is adding and subtracting. The seller is making a contribution to the borrower's closing cost and, so, the question is how much lower are the borrower's closing costs, that is the borrower's part, when the seller makes a contribution of $100. And the answer is, on average, about $50.

Now, what that means, of course, is that when the seller makes a contribution of $100 to the mortgage closing, that the total closing costs go up by $50. They do not stay the same.

So, in all three cases what we would like to see in a competitive transparent market is a one-for-one trade-off. The dollar value for the yield spread premium, a dollar of value for the points, and a dollar value for the seller contribution, and we do not see anything close.

What's more, we see quite different treatment depending on the type of lender with whom the borrower is dealing. When the borrowers are dealing with depositories and large mortgage banks, they see a benefit of about $25 for each $100 of yield spread premium that they pay. If they get their loan from a mortgage broker, it is only seven. Are those numbers different? Yeah, they are five

or six standard errors apart.

How about points? Points we have -- I think the biggest difference in how the different kinds of originators use them. Borrowers who go to depositories in large mortgage banks get a benefit of about $50 for each $100 that they pay in points. When they deal with mortgage brokers, not only do they not see a benefit, but each $100 that they pay in points is associated with $110 of additional cost. In other words, there is no benefit, there is a negative benefit to paying points to the mortgage broker.

Seller contribution, again, we see a difference that is substantial by type institution -- $70 benefit to the borrower through depositories and large mortgage banks and only $40 when we deal with brokers.

Now, but in the data there is also a hopeful sign, and that is the sign of what comes along when the borrowers, in some way, opt for simplicity. The simplicity loans are the no-cost loans. Now, what we mean by no-cost loans is not really no cost, this is a misnomer. What we mean is that there are no up-front cash payments to the lender or the broker. Now, the interest rates on these loans are higher, and they should be higher, but when we take all things into account, the differential in the interest rate plus the loan amount,

the credit score, race and education, the no-cost borrowers save $1,200 compared to the borrowers who pay a mix of cash and interest rate. And, so, the simplicity that is introduced by being able to shop on one number is big, it's a big number not a small number.

More importantly, among the no-cost loans there are essentially no education effects and no race effects. When we look at all the loans overall where we have the borrowers predominantly struggling with a rate point trade-off, about 6,300 of the loans are not subsidized and those are primarily the ones we are studying, 500 of those are no-cost loans. Five hundred is a big enough set to be able to get a read on the size of the race and education effects in this particular niche of the market, and it appears that this segment of the market is working in a much more competitive way for the borrowers than the part of the market where they are having to struggle with the rate point trade-off because not only do we see lower prices, we see less price discrimination.

There are two things that are different about the no-cost loans. It is not just that the borrowers can shop on rate alone, though I think that is an important part of it because all they need is one number to compare the loans if the loans are for the same amount of money: the interest rate. If the interest rate is lower, the

loan is a better deal, end of story. If they are struggling with the rate point trade-off, they are having to compare the cash upfront to the rate, that is a hard problem. It is even a hard problem for somebody who is in the mortgage business. And, so, God bless them, they are struggling.

But the other part of, the other aspect of a no-cost loan that is important is that essentially the lender is put on notice that the borrower is not expecting to write the lender a check at the closing table. Now, do I think that this inhibits fee creep between application and closing? Yes, yes, I do.

And, so, we can ask the question, are some borrowers failing to shop? This is my favorite, the "blame the victim" story. This is where we tied in HMDA data to look at loan applications, approvals, rejections, and originations by census tract and tied this in to the pricing that we see in the FHA data. In neighborhoods where the education levels are high, that is, all adults have a Bachelor's degree, the rejection rate is very low, it is only two percent. The walk-away rate is also very low. It is only three percent. Ninety-five percent of the loans that are applied for turn into originations. This is extremely high.

Then we go to the neighborhoods where no adults

have a college education, the rejection rate is only a little bit higher, five percent. But the walk-away rate is a lot higher, 25 percent. And, so, what we are seeing is that in the less well-educated neighborhoods, 25 percent of the borrowers are getting a quote and rejecting it. And, so, we cannot conclude that the less well-educated borrowers are failing to shop because a quarter of them are getting a quote; they are looking at the deal and they are saying, no, we are not going to do this.

Now, of course, we do not know what happens to these people after they reject a loan, we do not know. Whether they go shopping somewhere else or they just do not buy a house at all. But we know, first, that the people in these neighborhoods are offered worse deals and, second, that about 25 percent of them who are offered the crummy deals -- of course, the ones we are not seeing are surely, on average, worse than the ones we are seeing -- are rejecting the deals.

Now, advertisement. There are all sorts of other fascinating details in this study that you can learn if you go and read it. We have a chapter on defaults and dry holes where we study the relationship between these various factors and defaults. The most interesting one to me is that education is not related to defaults once you take account of the other variables like loan amount and

credit score and borrower income.

Second, the dry hole cost is somewhere between $150 and $400 because we can look at the fall-through rates across the census tracts. Third, not listed here, very interesting little detail when we look at the number of items that a borrower paid off as part of a closing because obvious -- sometimes in a loan closing, the borrower is obligated to pay off certain loans, consolidate debts and whatnot, and these numbers vary from zero to a dozen. Would you think that those people would have a higher likelihood of defaulting or a lower likelihood of defaulting? Could be a behavioral story or it could be a "get rid of your debt" story. It turns out that the higher number of payoffs, the higher the likelihood of default on the loan, not lower.

There is a whole chapter on title services that sees the same patterns of price discrimination, and my personal favorite result, which is taking account of everything else, is when either the real estate agent or the lender makes more on the loan than the title company. It gives a whole new color to what the fights over referral fees are about. And there is, of course, enormous variation by state in both lending fees and title fees. And state law is priced. In non-recourse states, you pay more because the likelihood of default is higher,

and in the large homestead exemption states, you pay less because the likelihood of default is lower.

Implications? The borrowers are confused, simplicity helps them, the disclosures could be better. Surely HUD's new disclosure will be an improvement. The FTC's suggestions would be an improvement, too, and we can probably do even better than this with more research. Non-economists and non-lawyers need to be involved in the disclosure design process. Thank you.

(Applause.)

MR. LEARY: Thank you very much. I am very tempted to abuse my power up here at the front and take the rest of the time asking my own questions, but I want to give folks in the audience the chance first. So, if anyone has any questions for our panel, please raise your hand and we will get a microphone to you. Please identify yourself before asking your question.

MR. VANGAURD: Chris Vanguard with the OCC. This is a question for Susan. Just a quick question. You discussed the price discrimination on the basis of education level of the census tract. With the price discrimination for race, is that race of census tract or race of the borrower?

MS. WOODWARD: Both. Both of them pick up a signal, and the patterns are different. For the very

large mortgage banks, it is only priced by census tract, not by individual. And when you go to the brokers, it is more priced by individual and less by census tract.

MR. LYNCH: I have a question. What is the right dependent variable for the effectiveness of disclosure? So, in some case it is percent of people getting the right answer. Is it that they choose the right product? What is it?

MS. WOODWARD: Ultimately, it would be how good a deal they get. And, so, my dependent variable is essentially the up-front cash plus the present value represented by the yield spread premium. But, of course, you have to step back in testing your disclosures to see what the borrowers would choose. So, I would say give them hypothetical loans and let them select among the hypothetical loans, and if the disclosures help them choose the one that is lowest cost, then the disclosures are good.

MR. LYNCH: Then what about the sort of things we were talking in the earlier sessions about choosing something that might look good in the moment, but if economic conditions or house change or house prices --

MS. WOODWARD: That is a harder question and I cannot answer that one for you.

MS. KLEIMANN: And if I could add to Susan, if

you would hand me the report.

MS. WOODWARD: Yes.

MS. KLEIMANN: What Susan was talking about, there is the HUD report on the testing for the development of the good faith estimate, and that is up on its website as well. It is not just one round of testing -- it was multiple rounds of testing. So, some information is going to be in that as well. And we were using exactly the measure that Susan's talking about. Could they identify the lowest cost, and what they could choose?

MS. WOODWARD: Right. But Professor Lynch's question is different. Suppose you had a fixed rate loan and an ARM loan.

MS. KLEIMANN: No, I understand.

MS. WOODWARD: And they had exactly the same expected cost. It is like, how do you guide the borrower to the one that is best for the borrower? How does the borrower decide which is the best for her?

MS. KLEIMANN: And I agree. That is a more complicated question, much more.

MR. LEARY: And it goes to how gnostic do we want to be about our decision-making, and how much do we think we know what the right answer is, and do we want to push people into what we think is the right answer.

MS. PAPPALARDO: Jan Pappalardo, FTC. Susan, I

have not had a chance to read the report yet. But there is one thing I am wondering about, and that is, as I understand it, if people shop according to a no out-of-pocket closing mortgage, they do better. Now, I am presuming, and correct me if I am wrong, that you obtain one of those through a yield spread premium.

MS. WOODWARD: Yes.

MS. PAPPALARDO: So, I am a little bit confused about how it is that you end up with the findings that YSPs are not being passed along to consumers at very high rates. Yet, in the end, they seem to do better in the high YSP situation.

MS. WOODWARD: Only if there is no cash. Only if there is no cash. So, if you separate out the no-cost loans from the loans where there is even a dollar of cash up-front, then the coefficients on the yield spread premiums are even worse.

MR. LEARY: Other questions?

(No response.)

MR. LEARY: I guess the room is tired. Well, I want to thank our panelists so much and the panelists from all the earlier sessions, and we are going to close with some final remarks from Jan Pappalardo.

MS. PAPPALARDO: I know everybody is tired. I know emails were coming back and forth from various

presenters at 2:00 a.m. So, I am not going to take very long.

First of all, I just wanted to say thank you. Thank you to all of our presenters today. A conference like this just does not happen; it requires people to be willing to participate and to step up to the plate with new ideas and new data, and I would like to have a round of applause for all of our presenters. They did a phenomenal job.

(Applause.)

MS. PAPPALARDO: I would also like to thank all the FTC staff people who pitched in to help. Micah Burger was a godsend. We would not have had a conference without him. Micah, are you here? Stand up, please, so we can acknowledge you.

(Applause.)

MS. PAPPALARDO: Many of our support staff, Maria Villaflore, Neal Reed, and Alethea Fields, thanks to them, too.

Well, so much new research today, it is hard to know where to begin. I could not possibly begin to really wrap anything up because I saw so much new data, so much new analysis for the first time, all important, all critical, all the types of information that consumer policymakers ought to know about, and I do hope that they

will find out about your data and your analysis by going to our website and trying to follow up on some of the findings that were presented today.

In trying to step back and think about what we have learned today and thinking of a theme, I am reminded of my dad. My dad always tells the story about his favorite professor, a philosophy professor. And the first day of class he walked in and said, "Gentlemen, this course is very simple. Do good and avoid evil. The only problem is what is good and what is evil."

And I think we are faced with these types of questions in trying to decide what is good policy and what is bad policy in this area. This morning we heard presentations that cast doubt on some common wisdom about what has gone wrong in the mortgage market and why. In the mortgage area of disclosures we know that disclosures that have been designed with the best of intentions have failed. So, it is very difficult to decide what is good and what is evil, what will help consumers and what will harm consumers in the long run. And this is the type of question that economists are always asking. They are always trying to analyze what the net long run effects of policy are.

I cannot begin to answer that question today. I thought one thing that I could do at 2:00 in the morning

was ask our speakers to take a little survey. Our speakers were asked to take a little survey during lunchtime today and this was the question they were asked: "Assume that you are a philosopher king or queen with the power to change one consumer policy to improve the mortgage market, what, if anything, would you change?"

And a follow-up question: "On a scale of zero to 100, with zero being not at all certain and 100 being absolutely certain, how certain are you that benefits of this change would outweigh the costs?"

I thought we should ask our panelists what they think because they know more about this than I do. I have the results here, not tallied in any systematic way, but the one thing that strikes me is that by far a majority of the responses have to do with improving disclosures.

Before I read the disclosure responses, however, let me read a few other responses that I got. One person said that they would improve public property and foreclosure records to include and make accessible the information needed to monitor and track records of brokers, lenders, appraisers, and other key participants. Seventy-five percent chance that that would have net benefits. One said that they would change advertising regulations. All ads for loans would be required to state the terms, exceptions, and estimated monthly costs for

typical borrower scenarios expressed in dollars. Great idea, but the question with that is, can you put all that information in an advertisement? And one would have to think about the role of advertising in the overall information process, but certainly worthwhile to think about. Ninety percent chance of success as an estimate.

Improve consumer financial education levels. Forty percent chance, this speaker gave as having net benefits. One person suggested more of an approach where you would use some of the behavioral research findings, and they would suggest having a 30-year fixed rate, no-fee mortgage as the default mortgage, and consumers would need to opt out of that mortgage if that is what they wanted to do. And the speaker estimated 80 percent chance of success in terms of net benefits being positive.

But the remainder of the comments had to do with disclosures. So, my take-away from this is that if there is one thing we know that we can fix, it is federally mandated disclosures.

I will read you some responses: "Depending on the type of mortgage and the particular features included, especially prepayment penalty, rate changes, et cetera, I would make consumers" -- oh, this is a driver's license test for a product selected. I am sorry, this is also more of a consumer education response. Depending on the

type of mortgage chosen, they would require a driver's license test for the product selected, and that was an 80 percent chance of success.

Now we get to disclosure ones: "Provide disclosures capturing the risk faced by borrowers along more effective disclosure of overall costs." And I presume that this speaker was thinking about including something about their risk of foreclosure or the risk of house prices rising. I thought that those were very fascinating suggestions today. I had not thought about that before. Now, that takes us to the whole world of, "how do you disclose risk to consumers?" It is very complicated. It is an issue that people are battling with in terms of how to disclose health risks in dealing with drug risks. But very important, very intriguing, and they give this a 70 percent chance of passing a cost benefit test.

"Provide simple, easy, understandable information and a list of suggested choices." So, this is a combination of disclosures with maybe some ideas of what might be relatively good loans for consumers. Now, this is a great idea, too. Of course, there is always this issue that we have learned today that consumers and their situations are very different. It is often hard to know ahead of time what loan product is suitable for one

consumer versus another. Yeah, it seems like a great idea to consider, and this respondent gave it an 80 percent chance of success.

"Simplify, simplify, simplify as much as possible. People need simplification and mild guidance." Eighty percent chance of success.

"Do not let any policy disclosure into the market without consumer testing. Multiple rounds to make sure the document works and multiple riders to create a better idea of what to do." One hundred percent chance of success is the estimate.

"Improve financial disclosure," this respondent says, and they are also talking about improving underwriting and financial literacy.

This response was adopt a one-page form, 95 percent chance of passing cost benefit test.

"Combine the truth-in-lending form with a good faith estimate," which is one thing that all these simplification form suggestions have included. This respondent said 98 percent chance of success.

"Better disclosure of broker fees including providing means of trading off discount points and yield spread premiums that might help." Given Susan's findings that no out-of-pocket mortgage options are the easiest to shop, you wonder how successful that would be, but it is

certainly worth thinking about.

One is a recommendation tool to sort different types of mortgages, according to your personal utility function, and allow the consideration of fitting according to various costs. I guess this would be like a combination of disclosure of loan details, as well as giving people more information on some government -- or some other kind of a website, I would presume. Ninety percent chance of passing the cost benefit test.

This respondent says "RESPA reform, which includes improving the good faith estimate, and allow bundling," also an issue in that area, 100 percent.

"Federal rule preempting state law that no disclosures could be promulgated without scientific support that consumers make better decisions with the information than without it." And this person says, 100 percent chance of passing the cost-benefit test.

And I did not write this, I do not know if one of my colleagues may have submitted it. "Turn disclosures over to the FTC," 99.5 chance of success.

(Laughter.)

MS. PAPPALARDO: So, the takeaway message, I think, from our experts who we invited today, is if we do nothing else, we should try to fix disclosures with comprehensive reform.

There is so much food for thought today, it will take days of going through the transcript to try to appreciate all the work that went into it. I thank you again for coming, and please check into our website. Thank you.

(Applause.)

(At. 4:42 p.m., the workshop was concluded.)

C E R T I F I C A T I O N O F R E P O R T E R

MATTER NUMBER: P085502

CASE TITLE: PROTECTING CONSUMERS IN THE MORTGAGE MARKET

DATE: MAY 29, 2008

I HEREBY CERTIFY that the transcript contained herein is a full and accurate transcript of the notes taken by me at the hearing on the above cause before the FEDERAL TRADE COMMISSION to the best of my knowledge and belief.

DATED: JUNE 25, 2008

ROBIN BOGGESS

C E R T I F I C A T I O N O F P R O O F R E A D E R

I HEREBY CERTIFY that I proofread the transcript for accuracy in spelling, hyphenation, punctuation and format.

ELIZABETH M. FARRELL