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Escaping 1980
Episode 3 – The Slide

**Brent Gloy:** Leading up to 1980, there was an oil shortage spurred on by the Iranian revolution.

**David Widmar:** The 1970s was one of those areas where all the heuristics started to fall apart.

**Brent Gloy:** One piece of information by itself sounds really great. High corn prices, higher than they've been, but then there's the rest of the story. Are we in a better position today because we've been really smart? Or are we in a better position day because we were just really unlucky in the 80s?

**Sarah Mock:** in the American imagination there's almost this mysterious link between farming and oil. I think I tracked it back to its source. The idea of striking oil out in a crop field, which seems to trace its popularity to the 1960s and the Beverly Hillbillies, who though they weren't farmers got rich and left their rural swamp home after finding oil shooting out of a rabbit hole. But there's actually a much closer link between agriculture and oil than just the coincidence that oil exists under the ground and farming is done on top of the ground so that accessing one, you're likely to bump into the other. But what does the oil have to do with the 1980s farm crisis? Everything. And it started with a pair of oil shocks.

**Brent Gloy:** Leading up to 1980, there was an oil shortage, spurred on by the Iranian revolution. In 1980, that was compounded even further by the Iran-Iraq war, which started toward the end of the year. But the weight of these events and many others were yet to be felt fully in the U.S. Farm Belt. Those implications kind of came to bear in about 1983.

**Sarah Mock:** These were the years when the idea of an oil war in the Middle East began to solidify themselves in American mind. A hallmark image from this time period is of cars waiting in mile long lines for the chance to purchase high price gasoline during the peak of the crisis, when many states were rationing fuel. Between 1980 in 1983, the skyrocketing price of energy had sent much of the world into recession. And by the later part of the decade, the U.S. would go to war in the Middle East, the two Gulf conflicts. But how did this broader energy crisis hit home in the farm economy?
That's today on Escaping 1980: the farm crisis that was, and what we can do to avoid the next one. I'm Sarah Mock. Today, we're going to wade into the murky waters of the broader U.S. and global economy to understand how causes well outside the ag sector started to push an industry at its peak towards a long slide into crisis. All the clues trace back to these two distinct oil shocks in the 1970s as the first indicators that trouble was ahead. Not just for the farm economy, but for regional and national economies, the world over.

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**David Widmar:** So, the first one was the oil crisis that began in the fall of 1973, when OPEC issued an oil embargo and they listed out several countries - the U.S., the United Kingdom, Canada, and this was all stemming from the Yom Kippur war and support of Israel. And so, that happened after the Russian Grain Robbery. And so, this was a different commodity, but we saw the U.S. was very reliant on energy imports and OPEC had a lot of clout, or a lot of power there. And so, when OPEC put in the embargo in 1973, that was peak OPEC power, and they had a lot of leverage and that created a lot of pain and it was a lot of data you could consider. Some of the highlights are oil prices went from about $3, a barrel to about $12 a barrel in a pretty short amount of time. And so that was a pretty big shock to the economy as people were adjusting to higher energy prices. And so, I think it's important to keep in mind that layers on top of food prices that were already increasing as a concern of the Russians buying all the wheat. And now we have this oil crisis.

**Brent Gloy:** Yeah. And I think some people say going from $3 to 12, it's only a $9 a barrel increase. We've seen fluctuations that big in a matter of a week recently, but that kind of misses the key point, which is it went from $3 to 12, which is - multiply by four to get there. So, it's a huge percentage increase. And when you're used to oil, and gasoline being nearly free, it causes a lot of stress. And you can imagine when it's that cheap, everything is optimized to use a lot of it because it's cheap, and it's plentiful. And I think is it's a big shock when that changes and it's a shock psychologically too, because something that you're used to having plentiful and abundant, all of a sudden goes to scarce and it causes a lot of emotional response as well as just the economic response.

**Sarah Mock:** Individuals and organizations throughout the economy felt these shocks and farmers were not immune.

**David Widmar:** I grew up with the story of the 1970s. And we grew up, I grew up in Southeast Kansas, which is unique in this because we grew up three or four miles away from the state line of Missouri and Missouri always has lower gas taxes. So even when I was a kid going to Missouri to get your gas was like the thing to do because you can save a little bit. But in the 70s, my dad always talks about when he was growing up and his memory was the gas wars and what they would do is they would load up in their trucks. And a bunch of people, a bunch of friends would get together with 55-gallon barrels in the back of their pickups and they drive to Missouri and they'd wait for the gas stations to lower their prices. And they'd fill up with these big barrels of gasoline, and they'd drive them back to Kansas, and then they'd figure it out to figure out how to get them out of the back of their truck. And some of these were farmers, but this was more of a personal consumption thing. And so, you have individuals drive with 55-gallon barrels of gasoline in their back of their pickup. You can only imagine how that would play out in 2020, but as you think about the decision maker, when you see gasoline prices or oil prices going

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from $3 a barrel, to $12 a barrel in the early-70s that starts to play with the decision-making, it really impacts how people think about making plans. And now, all of a sudden, they're spending their weekend time, their free time, their leisure time loading up barrels, empty barrels and driving 20 or 30 minutes to wait around for the gas to fall a little bit so they can load up and they're on their inventories.

**Sarah Mock:** But this equation is not as simple as to say that farmers are consumers of oil, so they were affected. Farmers consume fossil fuels in many other parts of their businesses, too. Including importantly, as part of the production of fertilizers. In short, conventional agriculture is energy intensive, and much of that energy is derived from fossil fuels. Because energy is a major input to agriculture that means there continues to be a strong correlation between agricultural commodity prices and energy prices.

**Brent Gloy:** The costs tend to be related to those energy inputs as well. And so, you tend to see prices creep up.

**David Widmar:** They're seeing those energy related inputs going up, so their budgets are going up, but also, we saw a higher commodity prices stemming from the uptick in commodity prices from the Russians purchasing all this grain. And so, you see this sort of on one hand, prices are going up, but on the other hand, inputs are going up and it makes it this hard budget and planning environment. And all of a sudden you start wanting to do things like, "Let's get a lot of this on hand, let's make sure we have some control over the products that we're going to need next year." And all that starts to really change how they are making decisions in that decade. Very different than where we were just a few years ago. It's just different how you think about decision-making in an environment where there's a lot of rapid changes in prices across the board.

**Brent Gloy:** And then when you get a lot of inflation, that almost encourages the hoarding, which is the idea behind rationing, right? It's you know, toilet paper and the pandemic - people worried they're going to run out. So, they go out and buy a year's supply. When enough people do that, you do run out as it becomes a self-fulfilling deal and it drives prices, shortages even higher. And I think that's what happened a little bit when you've got OPEC, which at that time, it was our energy policy was to buy cheap oil from Saudi Arabia, who we had a very good relationship with. And before that, Iran as well, right, with the Shaw. Then you get a war between Iran and Iraq and it changes that calculus a little bit. And so, something that people just took for granted and all of a sudden becomes a scarce commodity that people are all of a sudden, a little bit worried about having.

**David Widmar:** I think it's important to note that there was the situation in the early-70s, 73, which was the embargo. And then, by the time we got to the end of the decade, there was a shock again in 1979, that was stemming from the Iranian revolution. And that was whenever

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Iran, just wasn't able to produce as much as was planned and that sent oil prices up again. So, it was a small amount of disruption, but the global supply only decreased by 4%, but the markets reacted very aggressively. Prices roughly doubled during that timeframe. And so, it was just one of those environments where it wasn't just the one event, right. It wasn't just one oil shock. By the time we made it through the 70s, we had two big oil shocks. So, all of a sudden, we went from an environment where oil prices were low, you can think back to the 60s, right? That was the era of muscle cars and big engines, big muscle cars. And by the time we get to the end of the 70s, we're getting these imported Japanese Honda cars and these Toyota cars, and we have these small Volkswagens coming from Germany. And so, it was just a very different environment that we saw over that decade. It changed how people thought about a lot of things and farmers were part of that.

**Sarah Mock:** But more than just the energy needed to farm was causing agriculture and oil commodity prices to track one another during this time. There's a deeper mechanism to that we need to understand, something that economist describe as the elasticity of demand. Here we go -basically, all goods and services being bought and sold in the economy, lie somewhere along the spectrum from highly elastic to highly inelastic. Elastic goods are those that as the price goes up or down, people are quick to buy them or stop buying them. Movie tickets or fancy restaurant dinners are a good example of relatively elastic goods, because if the price goes up even a little, a lot fewer people will buy them and if the price goes down, a lot more people will. On the other hand, is inelastic goods, food and fuel both fall into this category and are considered inelastic because even if the price goes way up or way down, people will still need them and therefore buy them about the same amount. Commodity prices in general are very inelastic in the short term, meaning it takes huge changes in price to get people to change their buying habits even a little.

**Brent Gloy:** You know, your supply drops by 4% doesn't sound like much, but if you’ve got to get people to ration 4%, it's going to take big price moves to do that. And then on top of it, when you have those inelastic commodities like that in the short-term, they don't adjust very much, but they also cause a lot of economic pain. And so, then in the long-term you start to see the response, which is more fuel-efficient cars and more awareness of the importance of trying to avoid that situation again. We saw it in the last oil shock here in the United States, too. I remember I was living in Ithaca at the time and going to the gas station and paying over $5 a gallon for gasoline. And you're like, “Holy cow, this is crazy. Maybe I should buy a hybrid car.” Have enough people think about that and eventually some of them do. I didn't, but a lot of people did. And it creates a lot of long-term movement and change, and we implemented new fuel efficiency standards. All that kind of stuff comes about because these commodities are really inelastic in the short term and it takes huge price swings to make them change. Same thing, I keep using the toilet paper example, but it's the same thing, right? Toilet paper has got

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to get really expensive before people start thinking about, “What is the alternative here,” right? It's not something that you want to do on a grand scale.

**<u>David Widmar</u>:** So, the other thing that's going on, right. There are some price controls being used. So, the White House was saying, “We're going to try to limit some of these price changes.” And so, anytime you do that, you run the risk of creating lines or shortages. I think that was the other part of the gasoline story is not only were prices going up, but this attempt to limit prices going up created lines. And so, now people thought, “Not only are prices going to go up, but we're going to run out of it.” And so, this was a very self-fulfilling prophecy.

**<u>Sarah Mock</u>:** Plasticity of commodity prices tends to make ag commodities counter-cyclical. In other words, when the rest of the economy is doing poorly, the ag economy is often a bright spot.
Why is that? I'll let these guys explain.

**<u>Brent Gloy</u>:** When the general economy is doing really well it may not be quite as good in agriculture and vice versa. When our economy is not doing well, the general economy tends to see things like interest rates falling and that tends to do things like weaken the U.S. dollar and agriculture, having the large proportion, 30% of its value, being exported tends to do better in those environments so that helps it be a little bit counter- cyclical. And it's related to monetary dynamics and all kinds of other things.

**<u>David Widmar</u>:** Also keep in mind, demand for food typically grows in a pretty predictable way. It's a function of population. It's a function of incomes. And when we see maybe a bad economy on the horizon, or we look back at a slowdown or a recession. We see people buying fewer homes or fewer cars, or fewer iPhones. And we see impacts on the food side, we see shifts in the food, but generally speaking, people are still out buying food. I think that's part of the reason why the ag economy is maybe a little insulated from economic downturns. So, producers are a little bit insulated from economic downturns and on the other side, on the boom side, right, when people have a lot of money in their pockets, they might be going out and spending more at a restaurant. But when you go back to the farm level, that's still a similar amount of bushels, of corn or pounds of meat.

**<u>Sarah Mock</u>:** But and this is an important but, though there are multiple mechanisms from energy intensity to exchange rates and trade to consumer buying habits that would tend to make us think that the U.S. farm economy is always counter cyclical. It simply isn't.

**<u>Brent Gloy</u>:** I think there's somewhat limited evidence that's, there's evidence of it, but it's not super strong and it's by no means perfect.

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**David Widmar:** The limited evidence is that we've only had two big farm economy booms since the 1970s. We had the 1970s and recently. And so, you have to be careful when you really draw a lot of those conclusions because there's just - the boom shocks in agriculture are pretty few and far between. I do think, on the other side of the coin, we know that when the U.S. economy is in a slowdown, that generally means a weaker dollar, which translates into an easier environment where we can export commodities, but these are completely different wavelengths and sometimes they line up in a way that's provides a relationship, but the farmer economy is a subpart of the big house of the U.S. economy. And there are definitely relationships and how those things flow, but it's not a completely lock-step causation relationship.

**Brent Gloy:** It's loosely related, right. Always correlation. There's some joint movement, but it's by no means perfect. I think, on the inflation side, there's maybe more long-term evidence that real assets like farmland and other things tend to react to inflation pretty well. And the, and there's probably more evidence of that in the data that agriculture is positively related - land buys in particular - positively related to inflation. But again, it's by no means perfect. And it's not an equation with equal sign without an error, it has an error term on it. There are no set rules.

**David Widmar:** The idea of the farm sector being counter-cyclical to the U.S. economy is a heuristic. It's a rule of thumb that we hear a lot. And we had to be very careful with that as a decision maker. We have to understand how that might be true and how that might be false. And, in my opinion, and maybe Brent disagrees with me, I think that's a heuristic that can get us into a lot of trouble. I think we have to be very careful with understanding where that will fall apart. It's true in my mind, when it comes to the dollar and exports and how we could have some advantage in making up some market share and exports, but to flat out say that a recession in the U.S. economy is unequivocally good for the farm economy, I just don't think it's there. I just, it's not, it can make some small adjustments, but these booms in the farmer economy, which we saw in the 70s and we saw around 2010, the farm economy booms are very different, and they're not linked to macroeconomics in the U.S. or global cycles within the business.

**Brent Gloy:** I may even take it a step further and say that the heuristics are great, and they make for great stories and you can connect all the dots between it, but it doesn't necessarily mean that the plot is going to be the same the next time. So, the story might change a little bit. And so much of what we see in economics, I think, is like economic storytelling with the benefit of hindsight. And it's not always clear that it's going to work the same way every time. I think, in general too, the other thing you have to remember about agriculture is that when the economy is in turmoil, and prices are changing. So, they're trying, prices are reacting to try and balance

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supply and demand. And agriculture is a small sector in the grand scheme of things. So, for instance, when interest rates are rising, you're trying to tell people use less credit, agriculture could have dropped their credit use to zero and it wouldn't have been enough to impact interest rates at the kind of macro level of the U.S. economy. So, to some extent, that's what we say when we say we're they're price takers, not price makers. We have to adjust to the exogenous factors outside of the individual sector. And sometimes that adjustment can be so severe that you can quit using those inputs and it still wouldn't be enough. And so that kind of macro-economic shock is one of those things that just - it's just dumped on the sector and they can't adjust enough to actually make it better. They're just going to have to deal with it.

**Sarah Mock:** The one thing that sets economic shocks apart from other kinds of disasters is that you don't just have to ride them out. There are economic and political mechanisms in place to address these shocks. And at the time the us Federal Reserve chairman Paul Volcker was the man with the plan more on that after this break.
This episode of Escaping 1980 is brought to you by Brent and David, founders at Ag Economic Insights. Here's David, to tell you more about the genesis of the Ag Forecast Network.

**David Widmar:** We're always thinking about ideas, but one of the light bulb moments for us happened when we weren't even really thinking about the business. Brent called me one day and we're talking about grain marketing and he asked me, "Do you think corn's going to get over $4.40 this summer? I said, "Yeah, I think it's possible." And he goes, "Yeah, me too." So, we started talking about potential plans that he might be able to take advantage of in his marketing plan to capture that possible outcome and 30 minutes of this conversation, Brent's, like "I think that has a 60% probability of happening." And I was like, "Oh, I think it's a 10% probability of happening." And it was this weird moment for both of us, because how did this happen? We write a lot together. And so, we typically know each other's perspectives or are at least aware of the other person's perspectives, but how are we so far off? And one of the things we realized is that when you're dealing with uncertainty, it's really easy to trick your mind. And we were using an ambiguous question – "Do you think corn prices will get over $4.40?" It's a better question then - Do you think corn prices will rally? But there was ambiguity in that initial question, and these are questions that we were asking each other all the time. So how can we do better? We realized that there's a better framework. And so, we started working on what's now the Ag Forecast Network. So, we take questions or uncertainties that are on everyone's mind, and we turn them into something that everyone can get across the table from each other and be talking about the same thing.

**Sarah Mock:** But how does the Ag Forecast Network turn good questions into informative answers? Stay tuned. Or, if you're impatient, visit AEI.ag and be your own guru.
And now, back to the show.

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We know about this inflation from our conversation in our previous episode. And now we know how short oil supplies and high prices fueled that inflation. What we haven't talked about yet is what the U.S. Federal Reserve, or the Fed, decided to do about it.

**David Widmar:** So, one of the key characters was Paul Volcker. He was the Federal Reserve chairman. He came in and was determined to get inflation under control and the main lever or the main tool in the toolbox to control inflation are higher interest rates, which puts a break on the economic expansion, puts a break on the economy. And that really started to get inflation under control, but also created a stall in the U.S. economy and the makings of a crisis in the farm economy.

**Brent Gloy:** Paul Volcker is one of the more interesting or important figures of that time and he was appointed to the, as chairman of the Federal Reserve board in 1979. And, at the time he took over the Fed funds rate was 11.2%, by 1981 that increased to 20%. And the reason that the Federal Reserve did that, and I think Volker is the face of it, but certainly the whole board had to be in agreement with it because this was very unpopular. So, what they were trying to do is kill off the inflation that was rampant in the economy. And that move created a recession from 1980 to 1982 and it put unemployment at roughly 10%. The banks' prime lending rate hit 21.5% at its peak. As a result, immediately if you'd been borrowing money, for instance, that 10% of the rate, if that was a variable rate loan, was immediately in the teens if not higher. And it became very difficult to service any debt and keep in mind that not only is the cost of serving that debt, going up, servicing that debt is going up, the income that you use to service it was in free fall as well because of the grain embargo and other things happening in the farm economy. So, it was a really bad combination of events. And Mr. Volcker was very unpopular with a lot of people because this was hard medicine. Farmers actually took their tractors - and I vaguely remember this growing up and watching on the evening news and seeing tractors driving around Washington DC. And they were there mainly to protest the Federal Reserve's policies. And it was really tough medicine, I think for the national economy and it really tripped the farm sector from a bad situation into crisis.

**Sarah Mock:** Compared to where interest rates are today. There's simply no real comparison.

**David Widmar:** The upper target range for the Fed today is 0.25% - less than 1%. In early 2019 that got up to 2.5%. So, this is giving you an idea of where we are in more modern history. If you look at some of the data and you overlay that effective funds rate with the recessions that the U.S. has experienced, there was a sharp uptick in those effective fund rates in the early 1980s, and we had a small recession, and then interest rates dropped a little bit and then inflation and the economy came roaring back and it wasn't just Paul Volcker, it was the whole board. This is not one individual making the decision, but he was the leader and a very memorable leader, but he was the leader at that time, at the helm and they raised interest

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rates again to the last part of the decade, which put the economy into a second recession and they again dumped the rates, but it was that second run-up in rates that finally got things under control and inflation headed lower.

**Brent Gloy:** And that's one really key difference in today's environment than the 1980s. In today's environment, we just don't have that kind of inflation that they were dealing with back in that time period. It's actually, I think, a little bit of a mystery to most economists why inflation hasn't been higher? But the Federal Reserve has actually struggled to get inflation to their 2% target.

**David Widmar:** So, to that point, inflation is commonly defined as too much money chasing too few goods. I think the mystery sometimes is the chase. When there are things being chased, or when are they not being chased. And so, in today's environment, you can look at the Fed Reserve's balance sheet, and it's a big number. And that starts to get people concerned about chasing and it's a necessary condition, but it's not sufficient to induce inflation. I think that's part of that mystery is there's a lot of money arguably out there today, but not a lot of chasing. And so, we haven't had that inflation. In fact, we can't seem to kick up enough inflation. I think a lot of people would collectively agree that maybe a little more inflation than where we are today might be preferred to the current status quo. But of course, once you get a little bit of inflation, where does it stop? I think that was one of the problems they had in the 70s, is how do you get it reined back in? It's not easy to control.

**Sarah Mock:** This is where learning from history gets a little tricky. When individual players and unique decisions driven by personalities, as much as by markets makes it harder to apply lessons from the past to the present or the future. Because the reality is, if it hadn't been Paul Volcker, himself, driving conversations and shaping these decisions, is there a chance that it could have turned out really differently?

**Brent Gloy:** Yeah, sometimes I think and reflect a little bit and think about what Paul Volcker and the Federal Reserve board did in those days. I think that must've been really difficult because they knew when they took interest rates to that kind of a level to slow down inflation, they knew that this was not going to be good for the overall economy. And I think it probably took a lot of courage or conviction, at least conviction, to believe that what they were doing was the right approach going forward. And they had to do something that was going to be wildly unpopular. And I always wonder, would the Federal Reserve do the same thing today? If you took that same situation today and put it in place, would those policymakers have the conviction to go forward and do something that is super unpopular? Because they would be getting hauled in front of Congress even more frequently than they are now. Presidents, whoever that president might be, would not be happy with them and presidents often aren't happy with the Federal Reserve actions. Fortunately, I don't think we're in that kind of

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environment right now. What the Federal Reserve’s had to do was to lower maybe to the extreme. It's probably taking them a little bit of conviction to do some of the things they've done to try and get things going again, as opposed to try and do things to slow the economy down. I wonder how policymakers would handle that. And I'm guessing that at some point in the future, we'll get the opportunity to find out.

**David Widmar:** It took a lot or conviction to do that, especially when Paul Volcker came in. The Fed had already been raising the effective rate. So, in 1977, it got as low as 4.5% and by 1978, it was at 10%, and the Fed came in and almost doubled it from that level. You've already gone from 4 to 10 and now you want to go from 10 all the way approaching 20? So, I think that was the real courage, right. You just keep getting closer to the edge. And everyone knew that if you got too close, the economy would stall, and it happened twice in the 1980s and they had to respond in light of that. I think the other thing to keep in mind is the challenge was big. A decade of really strong, really high inflation was causing its own set of problems and it took a decade for policymakers to step in and make that decision. It was, it took a lot of courage, but it took 10 years to get the courage up to the level to actually do that. And there wasn't as much desire to curb the underlying problem of inflation really until Paul Volcker stepped in and started to lead the Federal Reserve at that point. So again, a lot of courage, but it took a big problem, and it took a lot of time to get everyone lined up, to start moving that direction.

**Sarah Mock:** So, inflation had raged, and Paul Volcker had taken steps to get it back under control and the result was ugly. The worst largely was yet to come, and we'll get much more into that in our next episode. But it's worth taking sometime today to think about how the connection between the farm economy and the overall economy has changed since the 1980s. One of the biggest differences may be that they are even more interconnected than they once were - not at the sector level, but at the individual farm level.

**Brent Gloy:** It's certainly true today that a lot of farmers have quite a lot of exposure to the broader economy through either a spouse working or they themselves working off the farm. I'm not sure what that data looked like in the 1980s or if they even tracked it at time to be honest, I don't know. But it's certainly true that today the farmers in the farm economy have diversified more. Of course, that gets into question two is what you count as the farm economy? What really is it? But if your job is to count farmers and to run farm programs and things, you have an interest in counting as many people as you can. So, they set the standards of what is a farmer pretty liberally. You don’t have to really do much farming to be counted as a farmer. So, that does beg the question as to what we're measuring, but it's definitely true that a lot of the farm economy has more diversification today than they probably did in the past.

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**Sarah Mock:** This higher level of diversification of incomes manifests mainly in one way. Off-farm jobs, supporting households that involve a farming member, either by a spouse or a child working beyond the farm or in many cases, the farmer doing so themselves.

**David Widmar:** So, a household has two sources on-farm and off-farm and on-farm has been a declining share of total household income. So, if we look back to the first part of the 70s, it would have been about 30 to 40% of the household income was coming from the farm. And now it's considerably lower, it's around 80%, or excuse me, around 20% today. So, from 30 to 20% and it got as low as 10% throughout much of the 90s and early 2000s. Now we have to be careful with that because there's a lot of differences here today. There are a lot of farms, a majority of the 2 million farms the USDA tracks, something like 80% of them rely on off-farm income, 100% or more. So, there's almost some subsidization of the farming activity that takes place.

**Sarah Mock:** There's a fascinating question here when we think about the modern farm economy. Are farmers mainly participants in the farm economy where their household income is dictated by commodity prices? Or are they mainly participants in the general economy where their income is more likely to be tied to levels of unemployment? The answer is surprising.

**David Widmar:** One of the things that we've noted in recent history is that farm loan delinquencies, which is a major financial stress, it ticked up pretty significantly around 2008 and 2009 during the great recession. In fact, farm loan delinquencies were considerably higher than we've seen in anything in the last five, six years. That was a pretty big shock to the farm financial system.

**Sarah Mock:** Why would farm bankruptcies have been higher in 2008 than in 2016, despite relatively good commodity prices in 2008 and much worse prices in 2016? Because vastly more than half of all farm households aren't making most of their income from farming. Thus, whether or not they keep their farms is a function of whether or not their partner keeps their off-farm job more than it is a function of good or bad ag prices.

**David Widmar:** So why are we talking about this? Because I think it's important that producers realize that the 1980 situation was a combination of a lot of things. It was the early-1980s was a period when the farm economy had low income, but also, we saw really high debt levels and we also saw really high interest rates. And so, when you take that combination of low income, high levels of debt, and high interest rates, it becomes really challenging to meet all of your obligations. And I think one of those things was completely outside of the agricultural sphere of influence and that was interest rates.
Farm debt is a small drop in the big total global or U.S. debt equation. And so, part of the challenge of the 1980s is that the macro economy had a lot of headwinds that were not helping

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the situation. It's a bit different here in the last few years, we've actually seen declining interest rates. We've seen interest rates, slide lower, and so that's been a helpful part of the last few years. Here, currently, is a macro economy situation definitely hasn't been as big of a headwind as it was a couple of decades ago. And you can even say it's been a bit of a help for producers navigating that. And an economy is made up of individuals aggregated up, so the farm economy has all these individual experiences added up. And I think sometimes what happens is we try to use these national, these big national data to tell what happened, what was happening at the individual level. If we get the problem flipped around and we have to realize that producers who were relying very heavily on farm income had significant levels of debt. They were hard hit during that timeframe.
Today, producers have a different set of situations. I think one of the challenges specifically in 2020, especially if you've rolled back to the summer, right, when we have low corn prices, low soybean prices and unemployment claims in the U.S. trending higher. There was an open question, which was going to be a bigger headwind? And they were both trending unfavorably, the farm economy and the U.S. economy - that could have been a really challenging situation. Thankfully, at least so far, the ag economy has shown some signs of improvement and the U.S. economy has stabilized and showed some upside. But when we were in the throes of the uncertainty of 2020 both factors were a challenge.

**Brent Gloy:** That's the other interesting thing is that diversification is good in some ways. And then when you lose your off-farm job, all of a sudden, and the ag economy is bad, it's really bad. And that certainly has happened and probably will still continue to happen as we kind of work through the implications of this pandemic.

**Sarah Mock:** But there's another half of this question that we have to consider - is the reason the ag economy is faring better today because of resiliency based on diversified income? Or is it more due to the fact that we're simply luckier today than we were in the 1980s? We'll tackle that right after this quick break.
The Ag Forecast Network turns good questions into valuable insights by giving its members broad access to how others are thinking about the problems. Here's David.

**David Widmar:** So, it's, what's the probability of the December 2021 corn futures contract getting over $4.25 between November 1st, 2020 and August 1st, 2021? So now we have a specific price, a specific futures contract, a specific timeframe, and we answer it probabilistically. We don't say "maybe" or "possible" like economists usually like to do, we put a probability. And then what we do is we go through, and we update our expectations, our forecast, as new information becomes available. We can share, "I think it's X probability. Brent thinks it's Y. What information are we taking in? How are we weighting that? Am I missing information? Am I putting too much weight on some picture I saw on Twitter?" And then at the end of it, we actually can go back and have a resolution - the event either occurred or didn't

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occur. The Forecast Network allows us to plot our expectations, plot how they've changed and see the resolution.

**Brent Gloy:** I think one of the great powers of the Forecast Network is it allows you to see what other people are thinking. I know that I have strong opinions - you can ask my wife - I generally have an opinion on something, but sometimes grain marketing is a great example. It would be very humbling when you're wrong. And so, then you start to wonder how far out am I? Okay. I think this event is very likely to happen, maybe an 80% chance. What are other people thinking? And with the Forecast Network, we can see that, and I email David all the time and say, "What do you think the probability of this is today?" And really that's how the Forecast Network started.

**Sarah Mock:** To join the community and start making forecast today. Visit AEI.ag Ag Economic Insights - be your own guru.
Now here's Brent to get us back into the thick of it.

**Brent Gloy:** Okay, so are we in a better position today because we've been really smart? Or are we in a better position today because we were just really unlucky in the 80s? Or we've been really lucky, so to speak, today? And that's where I think a lot of those factors that we're talking about today are completely outside the control of almost all of us. We don't have much impact on what's going to happen to interest rates, or inflation rates, or the value of the U.S. dollar. They're so far outside of our control, that chance plays a big role in causing these big swings.

**David Widmar:** It's a huge element of the situation is that some of the bets that were being made in the 1970s might not have looked bad, but you have to realize that the cards fell in a way that was very unfavorable. And what role of that was luck? They put a big bet on the table, don't discount that, but then luck was an element of that today too. So, you, how do you untangle that? How do you untangle that as a decision maker? And everyone's different, but what we've been carrying with us since the 1980s is be careful with debt. Be careful with leverage. Be careful overextending yourself. That was a really important - we pull up to the table in agriculture today with that collective lesson learned in the file in the back. And there's definitely was an element of bad luck and there's arguably an element of good luck.

**Sarah Mock:** Thought it may be hard to look at it this way. David says the last five years in the farm economy have actually been pretty lucky.

**David Widmar:** If the pandemic would have happened as the farm economy was first going through its contraction in 2014, 2015, 2016, it might've had a very different outcome for the sector. And the fact that we've been able to spread out some of the bad news over the last few years has probably been beneficial. It gives things time to spread out.

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**Brent Gloy:** Yeah, it seems that time in many ways is sometimes your friend in these deals. In part, because as we said, remember, ag demand is going to grow and it's going to grow over time. Okay. What gets us into trouble is assuming it's going to grow really fast over time, but steadily, but surely it will grow, and that time buys us the ability to catch up with the supplies that we've built, if we quit adding to them. I think the challenge of today, much like the challenge was in the 70s, is that there was a narrative that was driving a lot of the, oh, just the general things you hear when you talk to people. "We've got to eat. People have got to eat. People have got to buy food. They have to have it." Yes. But. We probably don't have to have 15 billion bushels of corn in the United States to satisfy those conditions. And, I think, that's where there's a disconnect. There's part of that, that's true. Yes, people have to eat food to live, but that doesn't mean it's like a blank ticket for the farm sector to just breeze to riches. And so, I think that is one of the lessons that I've taken away from all of this is just be aware when you hear mantras like that getting bandied about. Or push a little deeper on them.

**Sarah Mock:** But there's been more than luck, diversification, and monetary policy going on in the past 20 years, that has changed the circumstances in agriculture, particularly as it relates to changes and vulnerabilities in the energy markets.

**Brent Gloy:** With the advent of the Renewable Fuel Standard, it took those ag commodities and energy commodities, and made the linkage a little bit more, it made it more explicit. There's always some relationship, but once you have a huge portion of your corn crop going into the energy sector, it tends to tie the two together. And especially when oil prices are going up, it can push ethanol and corn prices way up, because if you have to blend the ethanol, then you have to buy the corn to put it in there. And it just, it locks them together. So that was a pretty big change that was implemented in the, what, mid-2000s. And so, it's made it more explicit than it was in the past.
So that just as a way that the Renewable Fuel Standard works, it says basically that you have to blend a certain amount of ethanol into the gasoline supply and it doesn't say anything about prices. It just says you have to blend so many gallons into the fuel supply. And as a result, like I said, it doesn't say anything about prices. It creates these Renewable Identification Numbers (RINs), which is how they monitor compliance - you get these credits and then if you blended a whole bunch of, or you didn't blend a whole bunch of fuel and you were supposed to, you have to go buy the credits that somebody else maybe blended more than they would have had too otherwise. They trade them back and forth. But at the end of the day, it's basically a quantity requirement that you have to put so much in, and, as a result, it's very inelastic. And so, in other words, price changes don't matter a lot. They've got to blend it in and when corn is tight otherwise - so there's a lot of demand in the early- or in the mid-2000s and beyond, a lot of demand coming out of China to satisfy their needs for feed, primarily. It creates a situation

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where you've got demand going up there and “Oh, by the way, you have to meet this.” So, prices really start ratcheting up.

**<u>David Widmar</u>:** The 1970s was one of those eras where all the heuristic started to fall apart.

**<u>Sarah Mock</u>:** But growth in the ethanol market is just one confounding factor that makes it more difficult to apply the lessons of the 1970s and 80s to today. This is one of the key issues with the question – “Is today, as bad as the 1980s?” This time period could be defined in so many different ways that finding apples to apples comparisons to today's market conditions is really, really hard to do.

**<u>David Widmar</u>:** So, if you would've told producers, right at the beginning of the decade, that commodity prices are going to go up to this level and it's going to be a really good time, right? I think three times during this era, corn got over $3 a bushel, and that would have signaled a really good time. But that piece of information alone wasn't enough to fully capture what happened in the entire decade, right. There were all these other elements - the oil shocks, the overall inflation in the economy, there was the embargo by the end of the decade. We can spend an entire day listing out all the things that happened in that decade. But that one piece of information alone, that corn prices were going to get over $3 a bushel, which would have been unbelievable in nominal terms to see that. When you take all of those factors that happened together, it was setting the stage for what became the 1980s farm financial crisis. That decade had some positive things in it that happened, but there were also some negative things. And a lot of those negative things came from the macro side of the economy. A lot of things got disrupted and adjusted in that macro side of the economy. I think to build this one step farther is the relationship between ethanol and gasoline consumption in the U.S. and corn today is one where we have to be careful with the heuristics and how we think about that. In one respect, Congress says, “You have to blend this many gallons of fuel per year.” But what happens when you have a 2020-like pandemic when people stop driving? We can work that out in the long run, but in the short run, there's, people aren't driving. They're not consuming gasoline. It doesn't matter how much you mandate ethanol to be used - we're just not driving as much and that really starts to make things difficult. It’s hard to make big adjustments in a short timeframe. I think that was the challenge here for 2020.

**<u>Brent Gloy:</u>** You have to be very careful in drawing conclusions from movements in individual markets. So, for instance, that ag prices are rising now doesn't portend, that doesn't necessarily mean that we're going to have huge amounts of inflation. I think people have been speculating that, “Well, this, these recent changes in ag commodity prices might be signaling that,” and they very well could be. But it's also possible that the crop was just a lot shorter than we expected, and the market knew it before the USDA announced it the other day as reflecting supply and demand. And it could have been, the Chinese just used up a lot more of their

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stockpiles than anybody thought they did, and they're trying to rebuild them right now. So, it's not necessarily an indication of widespread inflation, but maybe inflation in certain inputs. So, it's just very, it's very complicated in a complex system and to try and draw conclusions from one little piece of a gigantic puzzle is oftentimes done at your own peril.

**Sarah Mock:** When it comes to thinking about how the lessons of the 1980s might be applied to today's farm economy, this is critical. There's no single indicator that can be used to evaluate the health of the farm economy. Looking at just one factor, as Brent points out, can be incredibly misleading.

**Brent Gloy:** One piece of information by itself sounds really great - high corn prices, higher than they've been, but then there's the rest of the story, which is really high input prices, really high inflation, and all the other prices are changing. I used to always use the example that I think it was like 1982 corn prices were actually higher than they were in 79, but after you adjust for inflation, not so much. And so, it just, it's hard to manage through those environments.

**David Widmar:** In one respect, right, we have no history that would suggest this type of event to occur, but we have to get past heuristics and level one thinking, and we got to really break this apart. And this is the whole goal of the podcast series, is to break this down from a few heuristics that we're using every day, all of us in agriculture are using. We've got to break those down and really understand how they were accurate in the context they were formed, but how they might fail us in a broader context.

**Sarah Mock:** So, if there's a bottom-line conclusion here, maybe it's this - the farm economy is affected by the wider economy and its players both in the U.S. and globally. I know. It's not exactly a revolutionary breakthrough. Digging a little deeper, I think, it's safe to say that the 1980s farm crisis might've occurred differently if broader economic factors had been different. Again, kind of obvious. I'm just saying if things were different than they'd be different. So how does any of this help us understand the economic cycle we're in? And help us avoid another 1980s-like crisis in the future? It does this in a really subtle way. It helps us understand how interconnected the ag economy is to the wider world. And more importantly, at which points it's connected - from interest rates and the Federal Reserve, to exchange rates and trade, to energy inputs and oil prices. With this broader understanding of what led to the 1980s we're collecting clues, not only about where the signals existed for the last farm crisis that we might have detected if we'd been paying attention. But also, where we might be looking for signals to the next one in the future.
I was actually doing some research for this episode about whether any farmers in real life have struck oil in their fields. I found one case from 2013, where a farmer in North Dakota got out of his combine in his wheat field to find about six inches of oil soaking the ground, but he hadn't hit it rich. A pipeline was leaking, and it would take another five years for one of the worst

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onshore pipeline spills to be cleaned up. I've been thinking a lot about that and about how the energy crisis in the 1970s fueled the inflation that led farmers to believe they'd struck it rich, but in the end turned out to be a curse they'd be cleaning up for years. Oil and agricultural markets are both prone to extremes and eventually the circumstances change and coming down can be rough. But at the end of even the longest oiliest slides, eventually you bottom out. That's next week on Escaping 1980.

**David Widmar:** Until then please rate, review, and subscribe wherever you listen to podcasts. Thanks again for joining in. Brent and I would like to thank the people who have made this episode and the podcast series possible. First, the AEI Premium subscribers. Second, a huge thanks to the show's and series' producer editor and co-host Sarah Mock. Finally, the rest of the AEI team – from sea to shining sea this team has been working remote since, before it was popular. A special thanks to Megan, Sarah H., Jeff and Aerin. Thanks, and so long.

**David Widmar**: Greenspan was the immediate successor to Paul Volcker. So, you had the next chairman was two decades - a lot of our careers were under the Greenspan regime.

**Brent Gloy:** 20 years.

**David Widmar:** The last 15 years we've had three, so it's like a very interesting long tenure followed by short tenures.

**Brent Gloy:** Back in a day, he was viewed very popularly, Greenspan. Remember when he used to go to those briefings and they had this indicator, the size of his briefcase as to what the Fed was going to do. If his briefcase was really big, they figured they might change rates. If it was thin, he probably wasn't going to do anything.

**David Widmar:** There was always a saying that if the president wanted to talk to the chairman, he'd have to call, like he had to schedule an appointment. He took no, he was an independent, he tried to be very independent, but Greenspan, it was easy to be popular after Volker, right? Like he, all of a sudden was presiding over an era of declining interest rates. He had 20 years of falling interest rates and the economy of the 90s was arguably very favorable. And so, it was a very different era, again.

**Brent Gloy:** A good way to be popular, right. Be chairman of the Fed and lower interest rates for 20 years, it's going to work out pretty well for him. He was your, as you said, he was put into a situation where he had a lot better chance of succeeding and being popular than someone who went in and increased the federal funds rate by 900 basis points in a matter of two years. That's not going to make you popular.

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**David Widmar:** That goes back to luck, right? Like, sometimes you just are the unlucky… you're unlucky and you have to do an unfavorable job or an unpopular job.

**Brent Gloy:** He got the job fixing a problem that had lingered for a long time, so it wasn't a lot of fun.

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