>> "Please stand by for realtime captions.">> Hi everyone this is Laura at GPO with an audio check. Will get started in five minutes ,2 PM Eastern.>> I everyone this is Laura with GPO in the last audio check. We will get started shortly at 2 PM Eastern.>> Good afternoon everyone and welcome to the webinar, Discover Economic History with FRASER .My name is Laura Flynt and we have Ashley on tech support and our presenters are Aaron, and Matthew from the Federal Reserve Bank of St. Louis that runs the FRASER site. I will walk you through a few housekeeping reminders . if you have any questions or comments on the presentation feel free to chat them in the chat box located in about the bottom right-hand corner of the screen. I will keep track of all questions that come in and after the presentation our presenters will respond to each of them. We are recording today's session and we'll email a recording to the slides to everyone registered for the webinar. We will also send you a certificate of participation using the email you used to register for the webinar. If anyone needs additional certificates, because multiple people are watching with you, please email us VLPoutreach@GPO.gov and include the title of today's webinar. With the names and email addresses of the people that need certificates. At the end we will share a survey with you. We will let you know when the survey is available. There is an extra question in the survey this time for those of you familiar with the webinar.It's slightly different so we appreciate you taking it. And now I will hand the microphone to Aaron and he will take it from here.>> All right, thank you for coming. A special thanks to Laura and the crew for inviting us to present .my name is Aaron Coley the digital library services manager. I am joined today by my colleagues Jonah and Matthew to share an overview of the digital library and we are excited for this opportunity to share about FRASER , because it's an application and resource that has evolved over time. While some of you may be familiar with FRASER , it's really evolved over time. Today it's used for a variety of purposes such as public policy and economic history, exploring historical context. Matt will show it also helps establish a focus of the documents usable for computational analysis.However before we go too much further I wanted to share that the information used and views in this webinar are strictly your own and do not reflect the official position of the federal bank of St. Louis or systems.>> So what is FRASER, a digital library that brings together resources related to banking, finance and economic history, from all around the United States. I do like to click around during the webinar, you can go to Frazier .us Fed. FRASER was developed in 2004 when there were very few digital libraries available on the web. Developed as an adjunct to another popular resource out of the St. Louis Fed, which is a front runner in the economic information world, and has spread. If you're not familiar with Fred, that's often referred to as FRASER's bigger brother , with over 500,000 financial and economic time series datasets. FRASER was created to provide a snapshot in time of a position that may economic impact data. Showing what it is like, in the front top half this morning. Joking aside, the FRASER team has also evolved quite a bit over time. Making the mission seriously.The past 15 years they have worked hard to collect public access to over half 1 million resources that adds up to over 5 million pages of content. I will discuss in more detail in a minute, we spent a lot of time curating the collections so there be findable in a digital research environment . and our efforts are towards communicating the value of FRASER building relationships with our users. It's a simple mission but has been very effective for us and that the resources collected and FRASER have expanded over time, and we are continuously amazed at how users are engaging with the content. One great example of this is the prices and deputy guide which was developed by the University of Missouri . if you're not familiar it's a hugely popular resource to aggregate together primary source documents from FRASER and other resources that show the average retail cost throughout the history of the United States. If you wanted to learn what the price of fuel was in 1942, you could find that very detailed information in the resource.What is fascinating to us is this resort is built on top of the FRASER resources, so something that exist out there beyond the University of Missouri. We are excited about that resource.

>> FRASER is unique in thatit's an entirely digitalarchive . the collections havebeendigitized in cooperation withlibraries across the country .actively scoutingfor collections on the listsuch as the F DLP exchange andalso source materials from thenetwork of archives at each ofthe banks. FRASER has beendeveloped from FDLP and wehave collections from partnersyou may not initially expect,such as when we partnered withthe University of Utah,published papers or thehistory Museum in St. Louis,we digitize the papers ofMartin Junior did both ofwhich were long servingchairman's of the board ofgovernors, first and third. Wethink our partnerships aremutually beneficial to ourpartners and not only do wepay for digitization butwe also provide access topreservation data created inthe digitization process. Wehave been exploring processeswith partnerships, to leveragethe partners for the mutualbenefit and the benefit ofthe collection . because whatwe have learned, a lot oftimes the partners really knowthe collections much betterthan we do. So if you thinkyou might have materialsrelevant to FRASER users, wewould love to hear from you .Much of the day today workinvolves curating materialsfor ease of access. AsI mentioned, we have thecapacity for both in-house andoutsourced scanning . in-housewe have three high throughputscanners for materials. Forfragile where and uniquematerials, we have both flatand planetary scanning set up.All of our scans, whetherinternally or whetherwe outsource them, gothrough postprocessing withrigorous quality controlchecks. We are watching forthings like Mrs. in pages, themissing pages, deep text andothers that might issue theexperience of our users.Between the collections usingdetailed metadata such asauthor, date and so on, andusers are able to findrelevant information whenbrowsing our website . many ofthe materials weencounter require catalogingand description which is avery time intensive process.To capture this information weuse the mod metadata standard.And identifiers such asgel codes in theeconomics world. And numbersfor government publication. Wealso maintain the website withthe support of an agile team.In the web application folders,
 it works on the desktop and[indiscernible]>> Our job isto communicate and buildrelationships with existingusers, and to reach out andattract new users. Thecommunicationstrategies for pronged, wepost content almost daily onthe website. We also post datato the twitter feed. And wesummarize sort of monthlyupdates in our newsletter thatgoes out to around 8000subscribers. The longerform content we also have ablog audit. So that little bitabout what FRASER is and whatwe do , now I would like toturn it over to Jonah who willtalk more about thecollections and how they areorganized on the site.>>Hello everyone and thank youfor listening. Today I want toquickly take you through alittle bit about how the siteis set up in some of thefeatures unique to FRASER . There are many ways tointeract with and searchFRASER. The quickest, afulltext search across all thecollection. For ease ofreference we categorize amajority of material into fourprimary content areas. Data,Federal Reserve, archivesand education. Economic dataprovides access to releases ofpublications held by Frazier.Statistical releases is acollection unique to Frazier,we now hold over 50,000.Federal reserve is where youcan find our curatedcollection of historical andoperational documents, relatedto the federal reserve andsuch as the Federal openmarket committee that setsmonetary policy. The archivesection is where you are ableto browse all the collectionsof archival material relatedto the history of the FederalReserve. The FRASER team has partnered with librariesand archival repositories tomake this available online.You will also find digitizecollections ofarchival materials from otherfederal reserve banks. Theeducation section includeseducational material andfeatures unique to FRASER.Which we will talk about in amoment . We have so muchcontent and FRASER that itcan't all be made to fit inthe four primary areas. Therest of the materials andFRASER are easily found bylist of title, author, date,theme or subject area.Directing to the timeline, aFRASER feature withhistorical content. You canalso direct to another area ofcontent unique to FRASER. Wehave further valued historicalrecords by organizingthe materials. You can see thetheme on employment, acollection of a titles relatedto employment issuesavailable on FRASER. You canfind physical policy, gold andsilver, banking and financiallegislation, and many othersto help direct your research.One of the newest contentareas is the teachingand learning FRASER section.Which can be

found via theeducation section on themain page. Here developed bythe excellent curriculumdevelopers on theeconomic education, theselessons created for a varietyof different educatorsdrawn Frazier, FRASERcollections for teachersacross grade levels. We alsoinclude easy sharingand integration for Googleclassroom allowing educatorsto use FRASER materials in avirtual classroom environment. The digital collectionswithin FRASER make manyresearchers possible. This isthe kind of reference questionwe feel there in regularly.Resources available andFRASER, in this case the person found the answer in thefederal reserve bulletins andannual reports on thesecretary of the treasury fromthe year 1917 to 1919. FRASERholds a variety ofpublications you see ,congressional documents oneconomic history, bankinglegislation, economiclegislation, publicationsby government agency, andfederal reserve itself. InFRASER's collection ofthe documents produced bygovernment agencies, the datathey contain that mightbe particularly[indiscernible] forexample when the Bureau againwriting their own history theyturn to FRASER to fill in thegaps . FRASER is the mostcomplete digital archive ofhistorical andoperational documents. Thisis anotherinteresting questionanswered with FRASER. Withthe Federal open marketmeeting and collecting ofmeeting materials, withextensive materialsavailable for most meetings.From the first in 1933 to themost recent . each meetingdate is linked to as manydocuments as arepublicly available.Researchers have repeatedlyshared about finding thecollections of archivalmaterials helpful. With theaudience in mind, we have thelibraries and repositories tomake available papersof important players in thehistory of the FederalReserve. One of thepopular selections isthe mariner papers. Wedigitized in partnership withthe University of Utah. Thememember of the boardof governors, beginningin 1934. The architect of thebanking act of 1935, whichreform the structure,power and function of thefederal reserve system. Withthe World Bank and theinternational monetary, keyeconomic policy underPresidentRoosevelt. This collectionis proven to beextremely valuable, bothresearching the federalreserve system during the1930s and 1940s. As you can see
 the financial historian andeconomist here spoke about theFederal Reserve, power andindependence of the FederalReserve system. Now mycolleague Matt will go withthe Frazier API.>> Thisis Matt. I will close out thepresentation just goingthrough sort of how you canuse the FRASER API to extend FRASER for your ownapplication . Just alittle background, and API isan applicationprogramming interface. To tryto explain what that is, in asimple way as possible, andAPI basically allows you toaccess FRASER's server data through a series ofpublic endpoints, to usethat data as scale that wouldotherwise not be possible.Commonly this consist of fourmain request. The get, post,put and lead request. In oursituation, we only use the getrequest because we area public facing guide, wedon't want people missingaround with the data. We wantpeople to access the data. Sowe offer the API and it isbased off of the open archiveinitiative protocolfor metadata. Which is afairly typical schema of APIto use in libraries andarchives. What it allows youto do is open up your digitallibrary, two other platformsthat may want to use yourmetadata fordiscovery services, so they can
 cut people can findour materials via somesimilar portal. So what reallythe OI PMH schemaspecializes in this idea thatmetadata can be harvested. Sowith that there are sixmain API get requestassociated with OI PMH. Theyeach have their uses but forthe purposes of this exercise,this example, I think wewill look at mostly the listrecords and get records aPRA request. API request.These are the ones thatactually allow us to accessall of the metadata thatwe need. So with the listrecords API, what wepotentially see isstructured data associatedwith every single item inFRASER . What this allowsis different tech platforms todo, is actually get links andmetadata to all those records.An example of the use case isMissouri hub. Which is a,behind all the slides.Basically local, digital,platform that aggregatesdigital resources from anumber of different librariesin the Missouri area. Whatthey are able to do via theFRASER API is aggregate thisand injected into digitalpublic library of America.What we are doing here is justopening up FRASER resources to users that may not knowabout FRASER , but who areinterested in finding somematerial that we have. Anotherpopular use case that youmight be familiar with, whichis a universal catalog oflibraries across the world.What they are able to do withlist records API, is getreferences to all

of ourmaterials and inject them intotheir catalog. And so that isone use case. This idea thatFRASER records can be accessed at a large-scale and openedup to the public. Another usecase eliminating that alittle bit, you have the getrecords request. Just for anexample of how this can beused, I want to take a look atthe economic reports andprecedents, one of the mostpopular items we have. Weactually have a complete rungoing back to the 1940s,where the president ofthe United States issued themidyear economic report. Andso I think if I was anacademic or sort ofsomeone working in the digitalamenities, I wouldbe interested in looking atthe text of the economicreports and finding some sortof patterns. So rather thanactually go through and clickon each link, to get data,what we can do is use the getrecord API, to access thoseand get links to each ofthe PDFs. And then performanalysis on them. What thisprocess looks like, isbasically it sends a requestto get data associated withthe economic reports, via theget in point. And the APIreturns a response ofstructured data with each linkto the PDF. That if we can usethe partner of our choice,like oxygen or XLT can be used.

 We can parse that and get anumber of links to a reportfor each year. So now we aregoing to do, actually a video,to explain this process alittle bit. What we can dowith each of those PDFs then,is parse each sentence into alist of sentences. Parse eachPDF into a list ofsentences, and then usean analysis to assign asentiment score based onwhether the sentence containsmostly positive, mostlyneutral or mostly negativewords in it. And assign a score

 based on Matt. So after thatis done, we get thestructured data, and we canapply a number of differentmanipulations to sort of create

 a chart, showing the findings.

 And again this is not me being

 an analyst, it's me creatinga toy program, to show whatsorts of analyses mightbe possible. Via the FRASERAPI.This is particularly interestingbecause it does show a sortof stronger, neutral sentimentassociated with the yearsbetween 2007 and 2010. Butalso stronger language,stronger positives, strongernegatives. This can sortof act as the platform for theanalysis.>> So that's justone use. I think really we areinterested in hearing whatyour use might be, from theFRASER API or from any of theFRASER documents .

>> And we have been hearing alot from our users, quite abit of interest in workingprogrammatically with thecollections . an area we arekind of trying to explore theboundaries of a little bit. Soif you all have researcherswho are doing digital entities

, especially in the world ofeconomic history of publicpolicy research, we reallywould be interested in hearingfrom you, hearing about youruse cases. This is an area wereally see Frazier, FRASERmoving forward. And I wantedto provide a little bitof information before wewrap up, and for questions,where you want to come in onthe chat. And I wanted toshare that if you have anycomments or suggestions for uswe would love to hearfrom you, we have the emailaddresses on this slide. Iwould love it if youwould follow us on Twitter. just tweet out between fiveand 10 tweets a day thatshowcase and highlight some ofthe collections. It is a greatplace to interact with Tran,FRASER with some of yourfaculty and users. Also Iwanted to point out that wehave a referencecenter in-house. If you do have

 collections that come to youthat might be good for FRASER, or to direct your facultyto us, that is great aswell. And finally for those ofyou that do have guidesrelated economic history, orhistory, we have developed asearch widget thatis embeddable in theinterface. Allowing you tosend searches directly toFRASER from your guide . itsort of a new tool we havedeveloped for folks interestedin using it. You can learnmore about that on ourwebsite at FRASER dot St.Louis.org/

>> So at this time I'd love toopen it up to questions.>>Thank you so much, all threeof you. We did have one thatgot answered about theresearch build on top ofFRASER that was the prices andwages guide, there is a linkto that now in the stack .Bert noticed FRASER has amaterials dating back toJanuary 1784 . What kind ofmaterials are availableon FRASER from 1784 to 1789?>> It's a little hit or missthat far back. But we dohave some materials thatare available. They arenot necessarily primarysource material, but

there aresome from that timeframe. Theearlier materials that we haveare a little bit harder to geta hold of. They are of courseof interest to our users, sowe would love to expand thecollections in that area. Butit is not as comprehensive asthe sort of 1914 timeframe.Which is when the act was thesystem started. We really havesignificantly more collection.

>> Okay, a comment from Mariewho loves FRASER, a greatresource and sheappreciates it. And one fromBarbara who appreciates theheads up on the API and willrecommend it to herresearchers . And the questionfrom Mimi, if the libraryhas volumes of a series notshown on FRASER who would wecontact to see if we wantthese ?>> This is Jonah. Youcan contact me, my email is inthe middle. I would be happyto hear from you.>> Thank you

>> We do have a needs list andI believe it's available onthe about page . a link outfrom the text, adescriptive paragraph. I'msure we could get that linkand posted into the chat foryou all. We have that needslist and we keep it accurateso it is up to date. That iskind of what we are aware thatwe need. There are manycollections we may notbe aware that we need . if youhave something you think wewould be interested in, or youthink are users would beinterested in, we would loveto hear from you.>> Sarahasked about integrating FRASER documents into the classroom.We do havesome recommendations. I thinkyou will have access to theslides, at least a recording.We have a teaching andlearning FRASER page . thatcontains lesson plans, andindividual items that you canpull, primary source documentsto pull into your classroom,fairly easily. With somelearning objectives and thingslike that. We do haverecommendations for that. Weare really excited about howfolks are using FRASER in theclassroom . That is why werecently built out thatservice.>> Okay, thank you .do we have any more questionsfor the presenters? We willgive that a minute or two. Iwill ask Ashley inthe meantime to post the linkto the satisfaction survey forthe webinar. Like we said itwould be great if you couldtake the survey for us. Justtake the last couple ofminutes to put in, here is aquestion. What age or grade orthe education pages aimedat?>> They are aimed at avariety of ages and grades.Actually anywhere from K-12.There are a lot of resourcesfor economic education K-12.It goes up from high school tocollege and university andafter grad professionals.>>Laura was so inclined toinclude a question for usabout FRASER in the survey did
 a question of how we mightimprove, whether the website or
 if you have comments toshare, we would love to hearthose.>> Okay, do we have anylast questions for the moment?I am not seeing any morequestions. We do have all thecontact information for thethree presenters. Once again abig thank you for Aaron, Joanand Matt for a useful webinartoday. We hope you check outthe past webinars onthe website. This one willalso get posted there. We hopeyou will join us for futurewebinars. And one question,can you post the link to theneeds list. Cannot find it onthe about FRASER page
>> Absolutely. We will getthat in just a minute.>> Somelibrary and has alreadyposted it.
>> Excellent, thank you.
>> Okay great, once againthank you everyone did thepresenters and attendees,please fill out the survey.Have a great day.
>> Thank you.
>> Thank you.>>
[Event concluded]