

# How to Fix the Market for Event Tickets

Eric Budish

Professor of Economics

University of Chicago, Booth School of Business

First scalped ticket: Sept 17, 1986 (Mets clinch)

FTC Workshop “That’s the Ticket” on  
Consumer Protection Issues in the Ticket Market



Thanks to the Federal Trade Commission for hosting this event and for the honor of speaking.

This is an important market, that’s close to my heart both as an economist and as a customer.

As a customer, I’ve been using this market since I was a little kid, and thinking back, my first secondary market ticket was in 1986, the Mets division clincher. This was back in the day when fans stormed the field afterwards and ripped up the grass.

I was a happy-as-could-be 8 year old, in the left field loge with my dad, and we wouldn’t have been there without the secondary market.

But as an economist, it’s clear that the ticket market is broken in significant ways, especially in the last 15-20 years or so as both the primary market and the secondary market have moved to the internet.

My job is not to ask the black or white question “should there or shouldn’t there be a secondary market” for tickets, but to ask the more nuanced, and practical, question “what market rules would enable this market to work better.”

You may be surprised to hear a University of Chicago economist talking about market rules and regulations, but that’s a big misunderstanding of Chicago economics that I’ll come back to in the conclusion.

# Charles Dickens, Nov 1867

Mr. Dickens in Boston--The Eages Demand for Tickets.  
New York Times (1857-1922): Nov 20, 1867;  
ProQuest Historical Newspapers: The New York Times (1851-2007)  
pg. 1

## Mr. Dickens in Boston--The Eages Demand for Tickets.

From the Boston Journal, Nov. 19.

Boston, November 1867

- "... But the crowd out in the cold was a **most patient, orderly and gentlemanly crowd**, and seemed determined to be **jolly and good-natured** under any circumstances."
- "Jokes were cracked, some very good and some very poor; quotations from Dickens were made, some apt and others forced..."
- "**Everything in the sale of tickets within the store seemed to be conducted with entire fairness. The limit was set at forty-eight tickets to one person—**twelve course tickets—so as to **prevent, as much as possible, ticket speculating.**"
- "**But this was not entirely avoided. Speculators were on the streets and in the hotels selling tickets readily for \$10 and \$15 each for the opening night, and a few as high as \$20 each.** Tickets for the remaining three nights were also sold by speculators at high prices. At about 7:30 o'clock last evening every good seat and nearly every poor seat in the hall were sold; indeed, the only seats that could be bought were those on benches in very unpleasant places."

But the crowd out in the cold was a most patient, orderly and gentlemanly crowd, and seemed determined to be jolly and good-natured under any circumstances. And it was situated in a place where jollity was a virtue—wherein Mark Tapley even might find it a pleasant task to be oily. The wind swept around the corner of Hamilton-place incessantly and remorselessly, and worked its way through the thickest coats and the warmest shawls to the very vitals of those they attempted to comfort and protect. But there was no complaint; jokes were cracked, some very good and some very poor; quotations from Dickens were made, some apt and others forced; and snatches of songs were sung, the most popular of which was "We Won't go Home till Morning"—which at one time it seemed likely that some would not. And the crowd was gallant, too, as the following

Everything in the sale of tickets within the store seemed to be conducted with entire fairness. The limit was set at forty-eight tickets to one person—twelve course tickets—so as to prevent, as much as possible, ticket speculating. But this was not entirely avoided. Speculators were on the streets and in the hotels selling tickets readily for \$10 and \$15 each for the opening night, and a few as high as \$20 each. Tickets for the remaining three nights were also sold by speculators at high prices. At about 7:30 o'clock last evening every good seat and nearly every poor seat in the hall were sold; indeed, the only seats that could be bought were those on benches in very unpleasant places.

That's the

ticket



I want to start with an anecdote from the 1860s, over 150 years ago.

Charles Dickens was doing a tour of the U.S., and it was a hot ticket.

Here's press coverage from the first stop in his tour, Boston.

The article is called "Mr. Dickens in Boston – The Excess Demand for Tickets", with "excess" spelled in an old-timey way, and I want to read you a few excerpts.

The crowd in line for tickets was described as "patient, orderly", "jolly and good-natured." They were reading each other Dickens quotes to stay entertained, "some apt and others forced."

"Everything in the sale of tickets ... seemed to be conducted with entire fairness" and in particular there were ticket limits in place, to "prevent, as much as possible, ticket speculating."

"But, this was not entirely avoided" and tickets were resold for as much as \$20, which is about \$400 in today's money, up from a face value of \$2.

# Charles Dickens, Dec 1867

Mr. Dickens' Readings-Sale of Tickets for the Second Course.  
New York Times (1857-1922); Dec 12, 1867;  
ProQuest Historical Newspapers: The New York Times (1851-2007)  
pg. 5

## Mr. Dickens' Readings—Sale of Tickets for the Second Course.

Three weeks later, in New York City ...

- "... the widespread notoriety of the sale ... had the effect of gathering an immense concourse of persons, long before the hour appointed. At 8 o'clock, Tuesday evening, a little newsboy took up his station next the main door ... Gradually this number was augmented until at day-break over 150 persons had gathered"
- "A large proportion of those standing near the head of the line were ticket speculators, but scattered through the single file were many laboring men and several little boys, who only came to be bought off. The little fellow who led the force was very fortunate in selling his place to a Southern gentleman, it is said, for \$30 in gold. There were many such instances—indeed it was not uncommon for anxious individuals to give from \$10 to \$30 for the privilege of supplanting another."
- "A detachment of Police officers ... was present to preserve order."
- "...the unsuccessful ones who brought up the rear, retired with expressions of disgust more forcible than elegant."

That's the

ticket



At 9 o'clock yesterday morning the box office at Mott's Hall was thrown open for the sale of tickets for the second course of readings in this city by Mr. Charles Dickens. At the first sale, about twelve days ago, the attendance of purchasers was limited, because the public generally were not fully apprised of it, but the widespread notoriety of the sale of yesterday, through the columns of the newspapers, several days before, had the effect of gathering an immense concourse of persons, long before the hour appointed. At 8 o'clock, Tuesday evening, a little newsboy took up his station next the main door leading to the vestibule of the hall, thirty before midnight a party of seven came upon the scene and began the tedious waiting for the morning hours. Gradually this number was augmented, until at day-break over 150 persons had gathered, and as the hour approached for opening the doors approached the line had stretched as long as Mott's Hall, next to Irving-place, thence to Fifth-street, thence to Fourth-street, thence to and through Protestant-street again, until a score of persons only were needed to effect the union of the two extremes.

A large proportion of those standing near the head of the line were ticket speculators, but scattered through the single file were many laboring men and several little boys, who only came to be bought off. The little fellow who led the force was very fortunate in selling his place to a Southern gentleman, it is said, for \$30 in gold. There were many such instances—indeed, it was not uncommon for anxious individuals to give from \$10 to \$30 for the privilege of supplanting another. A detachment of Police officers, under the command of Capt. Cameron, of the Eleventh Precinct, was present to preserve order, while they did not, although at times they were tried to the utmost in their endeavor to keep the line straight and prevent impetuosity. In order to assist the speculators, who led the line, in their endeavor to get possession of choice seats, Mr. Dwyer directed his clerk to sell the back seats first, and so on to the front of the hall, which was accordingly done to the great disappointment of the grandly dressed. The sale continued until a quarter of twelve every seat in the house had been disposed of, and the unsuccessful ones who brought up the rear retired with expressions of disgust more forcible than elegant.

Here's an article from the next month in New York.

This time the article describes a crowd where "a large proportion of those standing near the head of the line were ticket speculators", and then "little boys" who were planning to sell their place in line.

One boy sold his spot in line for \$30 in gold.

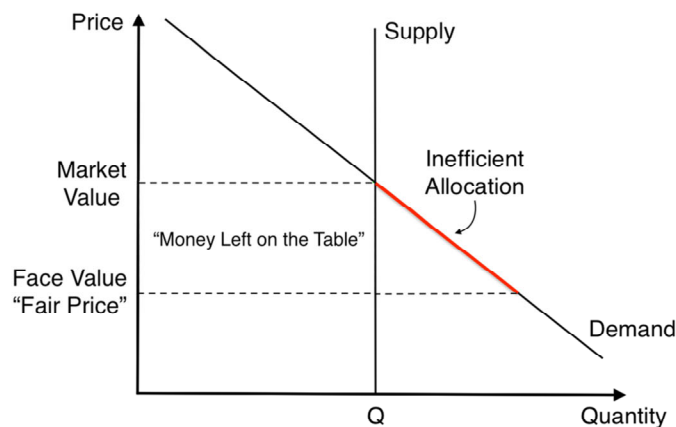
Police were on the scene.

Fans who missed out on tickets "retired with expressions of disgust."

So it took about one month for the market to go from patient and orderly, with fans reading each other Dickens quotes, to a market taken over by ticket speculators, with police on the scene and children taking bribes.

A New York Times op-ed from the era, described [quote] "gangs of hardened ticket speculators" who "carry on their atrocious trade with perfect shamelessness."

## Economics of Underpricing, Without Resale



- Issue 1: Inefficient allocation
- Issue 2: Seller leaves “money on the table”
- Gary Becker, 1991: “along with many others, I have continued to be puzzled by such pricing behavior”

That's the  
**ticket**

This is just to say that underpriced event tickets, and the associated resale market, rent-seeking activity, and controversy, have been around for a LONG time.

But I want to start with the economics of underpricing **WITHOUT** resale. Here's the basic textbook supply-and-demand diagram.

Assume there is a fixed supply,  $Q$ , let's think of this as tickets that are all the same quality. The demand curve depicts the valuations of consumers for these tickets, from very high to much lower.

There's a market-clearing price, of course, which is where Supply and Demand cross.

And then the diagram also depicts the below-market price actually used, denoted as the “Face Value” of the ticket.

There are two traditional economic problems with underpricing.

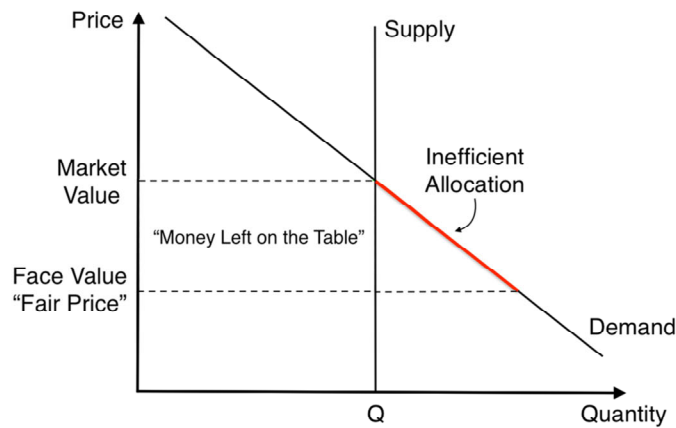
1. One issue with setting too-low of a price is that the allocation will be **INEFFICIENT**
  - a. Some customers with low valuations, highlighted in the red part of the demand curve, will get allocated tickets that could have more efficiently gone to customers with higher values.
2. The second issue with setting too-low of a price, the more obvious one, is that the seller is **LEAVING MONEY ON THE TABLE**

The rectangle area depicts exactly how much money the seller loses, because either way

they sell Q tickets, but for less money per ticket. This is marked “Money Left on the Table”

Gary Becker, the famous University of Chicago economist and Nobel Laureate, wrote in a famous article that he has been puzzled by such behavior for decades.

## Economics of Underpricing, Without Resale



- But many economists, including Becker, found reasonable explanations for underpricing
  - Events are a social good
  - Public image, want to be perceived as “fair”
  - “Best” fans might not be those able to pay the most
  - Careers are long (hopefully)
- **Underpricing as in the long-run interests of the artist/team, not some big economic blunder**

That's the  
**ticket**

But in the context of event tickets specifically, many economists, including Becker, have provided plausible explanations for underpricing

- Becker's explanation was that events are a social good
  - Nobody wants to go to a concert that is half-full with only rich guys
  - Fans get utility from being at events that have excess demand
- Another common explanation is that artists and teams might have a PR reason for setting a price perceived as “fair”, especially for fans who are die-hard fans but don't have a lot of money
  - This is an argument that by underpricing, you might make less money on the tickets in the short-run, but make more money in the long run by preserving your reputation, good-will with fans, and so forth

All of these economic explanations are stories for why underpricing can be in the long-run interests of the artist or team, not some big economic blunder. Not profit-maximizing for this particular show, but, if you will, “long run greedy”

# Resale Technology, Then and Now

- Dickens Era
  - Primary market: lines, queues
  - Secondary market: resellers mainly outside the venue, at hotels, etc.
- As recently as 1990s: similar to Dickens Era
  - Spitzer AG report. “Diggers”, “Scalpers”, “Ice”
- Economics of Pre-Internet Ticket Resale
  - Localized
  - Few economies of scale
    - One person = one spot in line
    - One person = one tout outside the venue
    - (Exception: corrupt box offices.)
  - A bit shady ...

OFFICE OF NEW YORK STATE  
ATTORNEY GENERAL  
ELIOT SPITZER



“WHY CAN’T I GET TICKETS?”  
REPORT ON TICKET  
DISTRIBUTION PRACTICES

BUREAU OF INVESTOR PROTECTION  
AND SECURITIES  
MAY 27, 1999

That’s the

  
**ticket**

The big thing that’s changed since the Dickens era, and even the era in which Gary Becker was writing, is the nature of the technology used for the resale market

- In the Dickens era
  - The technology in the primary market was lines or queues, and
  - The technology in the second market was resellers outside the venue, or at hotels, and so forth
- As recently as the 1990s, the technology was pretty similar
  - The New York Attorney General’s office, back when it was run by Eliot Spitzer, put out a report called “Why Can’t I get Tickets” that has great color on the resale market just before the rise of the internet
- There are two key economic points I want to emphasize about pre-internet ticket resale
  - First, it was localized
  - Second, there were few economies of scale
  - One person could get one spot in line
  - One person could be one reseller outside the venue
- The exception, where there were some economies of scale, was what I think of as Corrupt Box Offices. There’s this great fact, buried in footnote 34 of the AG report, that for Phantom of the Opera, the “ice”, or bribes, paid to the box office to divert tickets to resellers, exceeded the show’s actual profits.

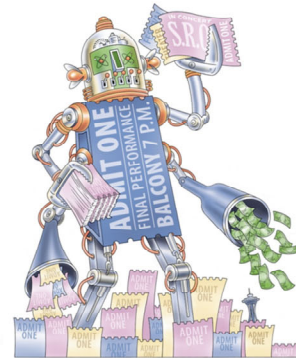
- But for the most part, this was a market that was local, low-scale, and, to use the technical term, a bit “shady”.



# Resale Technology, Then and Now

## Economics of Internet-Era Ticket Resale

- No longer localized.
- Massive economies of scale.
- Scale in the Primary market:
  - A single broker can purchase underpriced tickets across the country
  - Bots to automate! Win “race to click”. (Analogy: high-frequency trading)
  - Low-wage overseas workers to outwit captchas, etc.
- Scale in the Secondary market:
  - A single broker can resell across the country
  - A single website can make markets for events across the country
- Much less friction.
- Also less shady.
  - Ordinary customers can use eBay, StubHub, etc.
  - “I paid my way through college”



That's the

**ticket**

- In the last 15-20 years or so, both the primary market and the secondary market for tickets have moved pretty much exclusively online
  - In the primary market, it's primarily Ticketmaster, and there are of course some others
  - In the secondary market, its marketplaces like StubHub, SeatGeek, again Ticketmaster, and many others
- Let's think about how the internet has changed the economics of ticket resale
- First, it's no longer localized
- Second, there are now massive economies of scale
- In the primary market
  - A single broker can buy tickets across the country
  - Often deploying ticket-buying algorithms, called “Bots”, to automate the process and be as fast as possible. Sort of like in high-frequency trading, which is another topic I've researched.
  - Sometimes there is a human element to the ticket-buying process, like in filling out captchas or the like, but this too can be done at scale, in some reports using cheap overseas labor
- In the secondary market
  - Again, a single broker can re-sell across the country
  - And a single website can make markets for events across the country

- On the whole, the market has much less friction than it used to, and is also much less shady
  - Ordinary individuals can use eBay, StubHub, and so forth
  - One of the dads in my son's pre-K, when I told him I was preparing for this talk, joked that he paid his way through college by reselling underpriced tickets

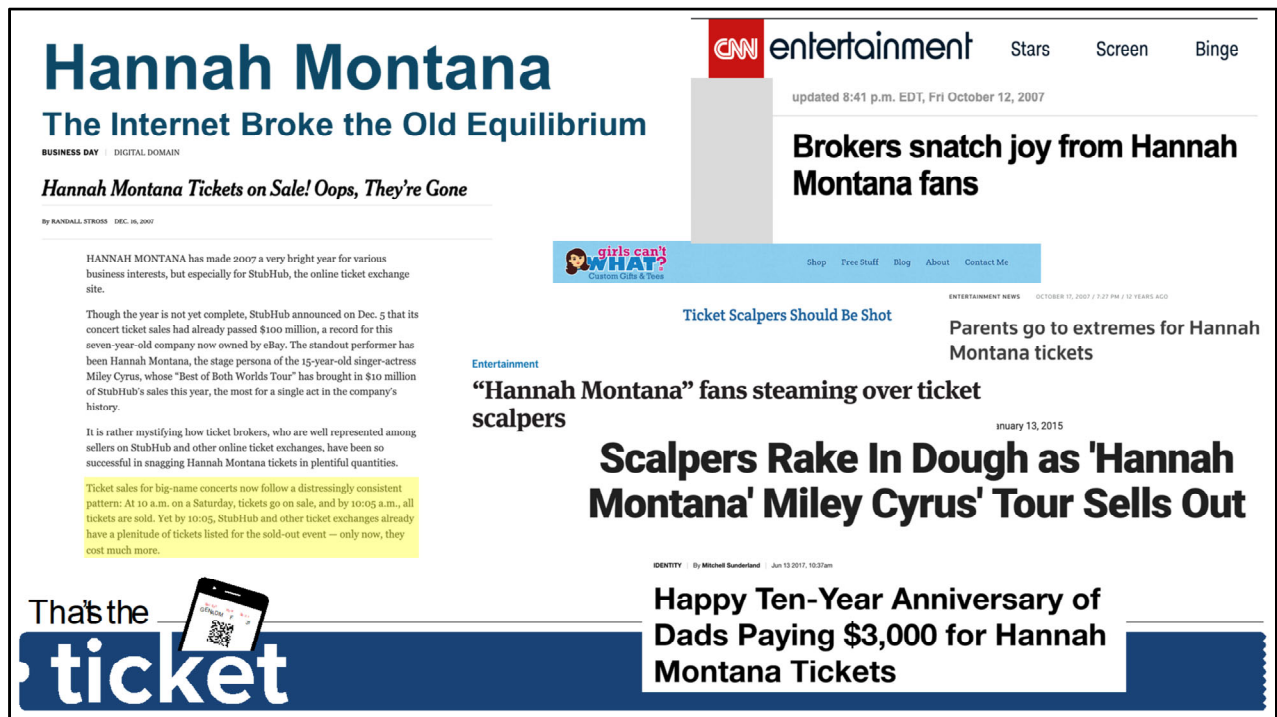
## The Internet Broke the Old Equilibrium

- It's easy to see why an artist or sports team might wish to charge a true fan a low price.
- It's really hard to tell a story where artists or teams want to charge brokers a low price, who then charge the fans a high price on StubHub, etc.
- It just makes no sense.

That's the

  
**ticket**

- Usually economists think of less friction as a good thing
- But in conjunction with systematically underpriced tickets, this reduction in economic friction, and increase in economies of scale, basically **BROKE THE OLD EQUILIBRIUM**
- As I emphasized, it's pretty easy to tell stories for why artists or sports teams might wish to charge their fans a price that isn't the absolute maximum the market will bear
- But it's really hard to see why an artist or sports team would want to charge a broker a low price, who then charges the fans a high price on StubHub
- With such low friction, the old system broke



- Here are some headlines from the 2007 Miley Cyrus tour. This is the one where she toured as both herself and her alter-ego, Hannah Montana, in what of course was called “The Best of Both Worlds Tour”
- There’s a NYTimes article from the time, where it describes a “distressingly consistent pattern: At 10am on a Saturday, tickets go on sale, and by 10:05am, all tickets are sold. Yet by 10:05, StubHub and other ticket exchanges already have a plenitude of tickets listed for the sold-out event – only now they cost much more.”
- Other headlines were
  - “Brokers snatch joy from Hannah Montana fans”
  - “Ticket Scalpers Should Be Hot”
  - “Hannah Montana fans steaming over ticket scalpers
  - Scalpers rake in Dough as ‘Hannah Montana’ Miley Cyrus tour sells out
  - And a recent one that made my dean laugh, “Happy Ten-Year Anniversary of Dads Paying \$3000 for Hannah Montana tickets”

# Ed Sheeran

## The Internet Broke the Old Equilibrium

Ed Sheeran tickets SOLD OUT in under five minutes



Photo Credit: erintheredmc. [Creative Commons license](#)

MarketWatch Latest Watchlist Markets Investing Barron's Economy Personal Finance Retirement

### Ed Sheeran is successfully battling ticket resellers

Published: Mar 7, 2018 3:49 p.m. ET



The U.K. just banned four ticket resellers from 'misleading' consumers about ticket prices

### Ed Sheeran's Management Admits to Selling Directly to Resellers

INDUSTRY MUSIC SCALPING TOP STORY May 30, 2018 TicketNews

That's the  
**ticket**

- Here's Ed Sheeran
  - You'll note one of the headlines is about his management "Selling Directly to Resellers", which is the Corrupt Box Office thing I mentioned earlier, modern "Ice"

# The Grateful Dead

## The Internet Broke the Old Equilibrium

npr WBEZ91.5  
CHICAGO 91.5 FM NEW EDITION

SIGN IN NPR SHOP DONATE

NEWS ARTS & LIFE MUSIC SHOWS & PODCASTS SEARCH



2:03

PLAYLIST

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TRANSCRIPT

MUSIC NEWS

### Sold Out Grateful Dead Chicago Concerts Attract High-End Scalpers

May 12, 2015 5:09 AM ET  
Heard on Morning Edition

Some sellers are offering three-day packages for the Grateful Dead concerts for more than \$100,000. Steve Inskeep talks to drummer Bill Kreutzmann, for his thoughts on the six-figure tickets.

KNOCKED DEAD

### Tickets for the Final Grateful Dead Shows Are Going for \$114,000

Three-day passes for the Chicago run of final shows are going for exorbitant sums on StubHub.



James Joiner Updated 07.12.17 3:09PM ET / Published 03.02.15 9:12AM ET



Photo Credit: Shelby Bell, [Creative Commons License](#)

That's the  
ticket

- Here's the Grateful Dead tour

# Bruce Springsteen

The Internet Broke the Old Equilibrium

## Springsteen Sets New Broadway Record in Resale Market

BRUCE SPRINGSTEEN ON BROADWAY | NOV. 27, 2017

Springsteen to Extend Broadway Run, Giving You More Chances to Miss Out on Tickets

By Ethan Sapienza

08.30.17

**Bruce Springsteen on Broadway tickets are already going for thousands, despite Ticketmaster's anti-scalping tech**



Photo Credit: Raph\_PH, [Creative Common License](#)

That's the  
**ticket**

- Bruce Springsteen

# Hamilton

The Internet Broke the Old Equilibrium

HOME > DIGITAL > NEWS

## Ticketmaster Says Bot Army Bought 30,000 'Hamilton' Tickets

*I Paid \$2,500 for a 'Hamilton' Ticket.  
I'm Happy About It.*

By N. Gregory Mankiw

That's the  
**ticket**



The New York Times

Opinion

OP-ED CONTRIBUTOR

## Stop the Bots From Killing Broadway

By Lin-Manuel Miranda

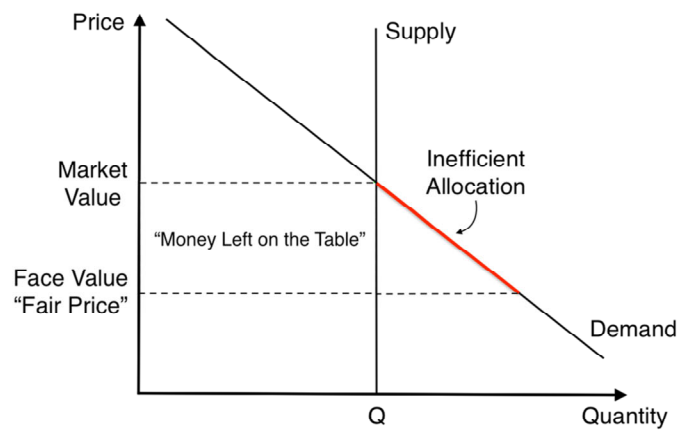
June 7, 2016



- And of course Hamilton
  - Where the battle against ticket brokers provoked Lin-Manuel Miranda to write an Op-Ed in the New York Times
  - And the distinguished economist Greg Mankiw wrote a column reminding people that sometimes markets clear at high prices, and that's ok
  - He bought \$2500 Hamilton tickets on the secondary market, and he was delighted he had this option



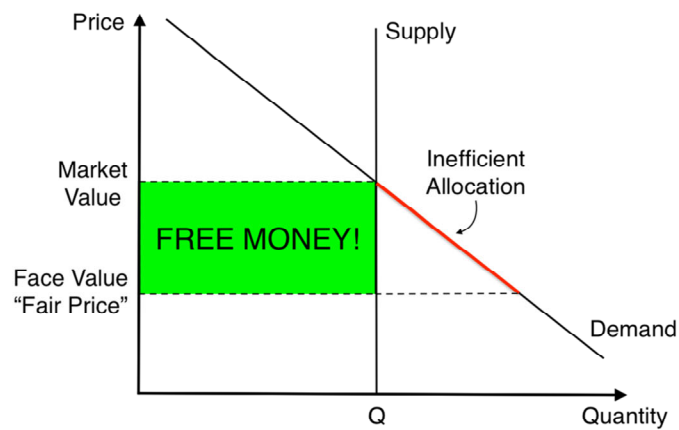
## The Internet Broke the Old Equilibrium



That's the  
**ticket**

- When I say “the internet broke the old equilibrium”, here’s what I mean in a graph.
- Before, we had supply and demand, the market clearing price, the “too low” price, and the rectangle depicted the “Money Left on the Table” by the artist or sports team.

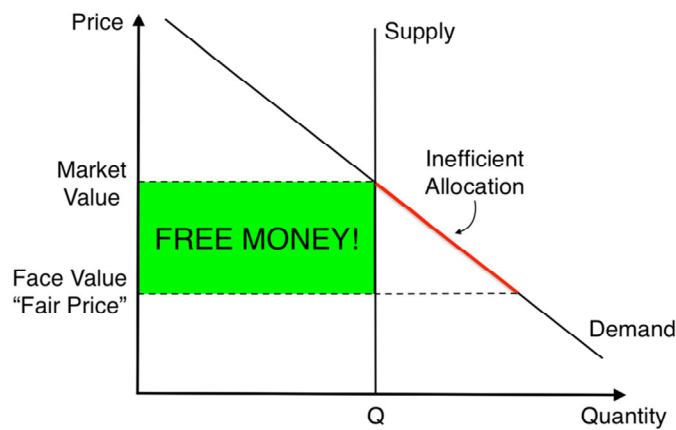
## The Internet Broke the Old Equilibrium



That's the  
**ticket**

- But with a frictionless resale market, this "Money Left on the Table" becomes what, to a ticket broker, or a college kid, etc. sees as FREE MONEY!

## The Internet Broke the Old Equilibrium



- Q: What happens when you give away FREE MONEY?
- A: RENT SEEKING!
- Scale of the problem ...
  - StubHub alone nearly \$5bn of volume
  - Ticketmaster another ~\$2bn of volume
  - Total: \$15bn? (Estimates vary)
  - Ticketmaster: 20% of all tickets get resold. In extreme cases, up to 90% for some events.
  - Recent lawsuit against a ticket broker claimed that a single ticket broker was able to get 30-40% of all tickets to Hamilton
- "The secondary market is now the market"

That's the  
**ticket**

- And what happens when you give away free money? What economists call RENT SEEKING. Going to extreme lengths, often at extreme cost, to get your piece of the free money.
  - Again, high-frequency trading is an analogous example, where right now in financial markets, high-frequency trading firms are spending untold sums of money on being literally one-millionth of a second faster than their competition, to scoop up Free Money in financial markets
- To give you a sense of magnitudes
  - StubHub alone has about \$5bn of annual volume on its site, based on its 2018 10-K filing and its recent growth rate
  - Ticketmaster, based on its 2015 reported figure of \$1.2bn, and reports since of growth rates of between 16%-24%, has about \$2bn of volume, give or take
  - The market as a whole has been estimated to be on the order of \$15bn
  - Ticketmaster said publicly in 2011 that 20% of all tickets purchased in the primary market are resold, and that figure has surely gone up since 2011.
  - They told me that in extreme cases, bots and other speculators could amass as many as 90% of the tickets for a particular event
  - A lawsuit related to Hamilton claimed that a single broker got 30-40% of all Hamilton tickets, which is kind of crazy.
- So basically, the FREE MONEY has been scooped up by brokers and the secondary

market, and we're now in a situation where "The secondary market is now the market".

# Who Gets the Rents From Resale?

- Example
  - \$100 primary-market price (inclusive of fees)
  - \$200 secondary-market resale value (inclusive of fees)
  - $\$200 - \$100 = \$100$  is “economic rent”. The “prize” in the rent-seeking competition.
  - Secondary market venue fee:
    - 15% of resale price to buyer
    - 15% of resale price to seller
    - Resale price = \$174 (because  $\$174 (1 + 0.15) = \$200$ )
    - Total fees = \$52
  - Broker profits
    - Broker gets the rest of the economic rent:  $\$100 - \$52 = \$48$
    - Equivalently, gets  $\$174 * (1 - 0.15) = \$148$  net of fees, paid \$100, nets \$48
  - Punchline: at current fees, secondary-market platform gets a large chunk of the underpricing rents. For tickets with 100% markup, split is about 50/50.

That's the

**ticket**



- Before I get into how to fix the problem, I want to go over some simple math about how the pie gets divvied up. That is, WHO GETS THE RENTS from resale
- Suppose there is a ticket where the price in the primary market is \$100, inclusive of all fees. That is, the buyer's out of pocket expense is \$100, all-in
- Suppose that same ticket's true market value, in the secondary market, is \$200, inclusive of all fees. That is, the market-clearing price for the ticket, inclusive of all fees, is \$200
- The difference between these two prices, \$200 minus \$100 which is \$100, is the “economic rent”, or the “prize” in the rent-seeking competition to buy mispriced tickets
  - This is a fairly typical level of mispricing – in my own study, and in two other well-known studies [Sweeting in the JPE, and Leslie and Sorensen in REStud], the average observed secondary market resale price was about twice the primary market price.
- Let's do some quick math on fees
  - Suppose the secondary market's fee is
  - 15% of the resale price to the buyer, and 15% of the resale price to the seller. As you'll see on the next slide, this is actually a bit too low.
  - The secondary market doesn't collect fees on the \$200, but on the price as displayed on the site, which is pre the Buyers' fees. This would be \$174 in this example, because \$174 plus 15% equals \$200
  - So the secondary market site would collect 15% of \$174 from the buyer, and

another 15% of \$174 from the seller, for total fees of \$52

- What are the broker's profits?
  - Well, the broker gets the rest of the economic rent. There was \$100 of economic rent, of which the secondary market platform got \$52, leaving the broker with \$48
  - Another way to see this is to take the \$174 price listed on the site, subtract the 15% fee paid by the seller, that gets you to \$148 for a ticket they bought for \$100, so \$48 in profit.
- PUNCHLINE: at current fees, the rents from underpricing get split between the broker and the secondary-market platform. In this example, the split is about 50/50.

# Who Gets the Rents From Resale?

Platform	Buyer Fee	Seller fee	Total Fee as % of All-In		% of Rent Captured by Platform if Ratio of Market Price to Face Value equals: (^)		
			Price to Buyer (*)	Take-home to Seller (**)	1.5x	2x	5x
StubHub	22%	15%	30.3%	43.5%	91.0%	60.7%	37.9%
Ticketmaster	17%	14%	26.5%	36.0%	79.5%	53.0%	33.1%
SeatGeek	30%	10%	30.8%	44.4%	92.3%	61.5%	38.5%
VividSeats	28%	10%	29.7%	42.2%	89.1%	59.4%	37.1%
TickPick	0%	10%	10.0%	11.1%	30.0%	20.0%	12.5%

Note: Fees as observed by the author on June 6th, 2019 for tickets for the Rolling Stones, Chicago, June 21<sup>st</sup>, 2019.

(\*) computed as (Buyer Fee + Seller Fee) / (1 + Buyer Fee)

(\*\*) computed as (Buyer Fee + Seller Fee) / (1 - Seller Fee)

(^): see previous slide for example of calculation

That's the  
**ticket**

- Here's a table with lots of different versions of that same math.
- In the first few columns you see the actual Buyer and Seller Fees, for 5 secondary market sites. These are the fees observed by me and my research assistant in the market for Rolling Stones tickets in Chicago, fees can vary somewhat across events.
  - For example, StubHub's fee to the buyer was 22%, and to the seller was 15%
- In the next two columns, some algebra turns these two fees into a single "total fee". You can think of this total fee either as a % of the all-in price paid by the buyer, the \$200 in the previous example, or as a % of the all-in price received by the seller, the \$148 in the previous example. You can also just sum the two fees, so 22%+15%=37% to get the fee as a % of the listed price on the site.
- The last three columns then ask what % of the "Economic Rent", or "Prize" is captured by the secondary market, for different degrees of mispricing. The "2x" column corresponds to the example on the previous slide, where the price in the secondary market is 2 times the price in the primary market. You'll see the secondary market's capture of the rents is about 50-60% for StubHub, TicketMaster, SeatGeek, and VividSeats, and about 20% for TickPick, which doesn't charge buyer fees.
  - In the 5x column, you can see that for events where the primary-market is really dramatically underpriced, so there is a 5x difference, the secondary market still captures about 35% of the rent
  - In the 1.5x column, so cases where there is a relatively modest difference

between the primary market price and the secondary market value, the secondary market's share of the rents is much higher

- In case it's not obvious, what drives this math is that the secondary markets all charge fees based on the SALE PRICE of the ticket, not the RESALE PROFIT of the ticket. So 30-40% of the sale price, on a ticket you can only mark up by about 50%, is a lot of the economic pie.



# Economic Gravity

## THREE CHOICES

1. Set a market-clearing price in the primary market.
  2. Set a below-market price in the primary market. Much of the “real” allocation will happen in the secondary market.
  3. Set a below-market price in the primary market + ban resale.
- Key point: setting a below-market price, and hoping/praying that the tickets go to fans and never get resold, is economics fantasy land.
    - The way to get tickets to fans and not have them get resold, is to either set a market-clearing price in the first place, or to prohibit reselling them.

That's the  
**ticket**



- I now want to turn to how to fix this market
- And to do so, the 3 basic choices that artists and teams have in this market, based on economic logic, or what I'll call “Economic Gravity”
- Choice 1, the most standard economics choice, is to SET A MARKET-CLEARING PRICE in the primary market.
- Choice 2, is to set a below-market price in the primary market, but then have most of the “real” allocation happen in the secondary market. Brokers will scoop up a lot of the under-priced tickets in the primary market for resale on the secondary market.
- Choice 3 is to set a below-market price in the primary market, and BAN RESALE.
- The key point I want to emphasize is that what's NOT A CHOICE is to set a below-market price, and then just hope and pray that fans will get the mispriced tickets, and there won't be a fervent secondary market.
  - I agree that primary-markets can do a better job of detecting and diverting Bots, and like the overall idea of Verified Fan that Ticketmaster has been pursuing, but that's just a never-ending cat-and-mouse game between the primary market and the brokers.
  - The economically reliable way to get tickets to fans and not have them get resold, is to either set a market-clearing price in the first place, or to prohibit resale.

# Choice 1: Market-Clearing Price

- Methods
  - Auctions
  - Dynamic pricing
  - Use past data

Stakeholder	Effects
Artist / Team	<ul style="list-style-type: none"> <li>• Pro: more revenue</li> <li>• But: bad PR? Risk of empty seats (TSwift)</li> </ul>
Secondary Markets	<ul style="list-style-type: none"> <li>• Con: less volume ... took away the “free money”</li> <li>• Still a role for secondary market, just reduced</li> </ul>
Brokers	<ul style="list-style-type: none"> <li>• Con: took away the “free money”!</li> <li>• Nuance: also engage in less rent-seeking activity</li> </ul>
Fans	<ul style="list-style-type: none"> <li>• High prices</li> <li>• Arguably similar allocation to status quo</li> <li>• Fans who would have been able to purchase at below-market price are worse off</li> </ul>

That's the  
**ticket**

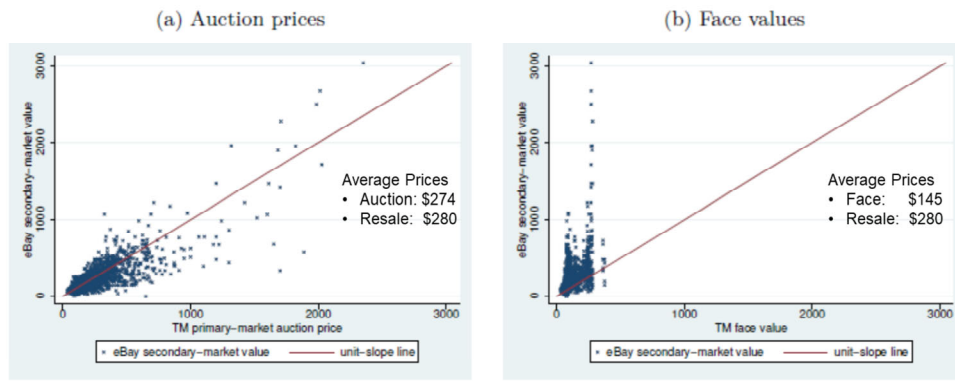


- Let's now go through each of these 3 choices, starting with Market-Clearing Prices
- There are a few methods for setting market-clearing prices.
  - A rare one, but fond to economists, is Auctions. I'll talk about that more on the next slide.
  - The most common one is to use what's called Dynamic Pricing, in conjunction with Data, to set market-clearing prices.
  - Basically, use good data, including resale-market values, to understand what prices clear the market.
  - Then, if you're too low, dynamically raise the price, and if you're too high dynamically lower the price.
- What are the effects of market-clearing prices on the various stakeholders?
  - ARTIST/TEAM
    - Well, they get a market-clearing price, so more money
    - The possible downside is bad PR, if the price the market will bear is seen as too high, or if they overshoot. The Taylor Swift tour last year seemed to have a bit of that
  - SECONDARY MARKET
    - Secondary markets will have less volume, because setting a market-clearing price in the primary market takes away a lot of the FREE MONEY
    - There will still be an important role for the secondary market, just

smaller than it is at the moment

- BROKERS
  - Brokers are badly hurt, because you took away the “free money”
  - One economic nuance is that brokers spend a lot of time and money trying to win underpriced tickets. Economically, the “marginal” broker shouldn’t be making a huge profit net of his time and money costs.
- FANS
  - Last, fans, pay market-clearing prices
  - Many will grumble that the price is too high
  - Fans who would have been the lucky ones in the old regime, able to buy underpriced tickets, are worse off

# Evidence on Auctions



That's the  
**ticket**

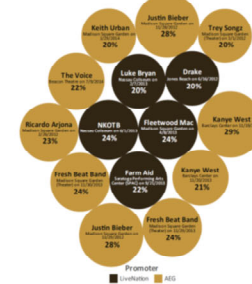
Source: Aditya Bhawe and Eric Budish, "Primary-Market Auctions for Event Tickets: Eliminating the Rents of 'Bob the Broker'"

- No surprise to an economist, market-clearing prices work, in the sense of clearing the market.
- Here is evidence from my research paper on Ticketmaster's use of auctions for premium seats, which they used from about the mid-2000s through about 2011.
- On the left-hand side, you see on the horizontal axis the price for seats in the primary market, and on the vertical axis the price in the secondary market. Each dot is a "Concert-Section-Row"
- As you can see, the dots line up against the red line, which means the primary-market auction "got the right price" in terms of what the secondary market would bear, at least on average. The average auction price was about \$274, the average resale value about \$280
- On the right-hand side is the same seats, but using the face values instead of the auction prices. You can see that the face values are systematically too low, with a few extreme cases. On average, the markup between the face value and the resale value was about 100%

## Choice 2: Underprice, Much of the Allocation in the Secondary Market

Stakeholder	Effects
Artist / Team	<ul style="list-style-type: none"> <li>Less money than market-clearing price</li> <li>Less heat from fans. "Tried" to set a fair price</li> <li>Some artists/teams seem to divert tickets to secondary market, to get market price</li> </ul>
Secondary Markets	<ul style="list-style-type: none"> <li>Winner: get a big share of the free money</li> </ul>
Brokers	<ul style="list-style-type: none"> <li>Winner: get a big share of the free money</li> <li>Nuance: "marginal" broker should break even, free entry (Hsieh and Moretti, 2003)</li> </ul>
Fans	<ul style="list-style-type: none"> <li>HATE THE STATUS QUO.</li> <li>Hence 6724 comments to FTC.</li> </ul>

Figure 2. Fourteen Popular Shows Held at Least 20% of Tickets for Insiders.  
Source: Live Nation/Ticketmaster (2012 - 2013 and 4Q4 (2012) - 2013)  
Filtered for shows with 20% or more total capacity placed on hold



That's the  
**ticket**

- Now let's talk about Choice 2, which is to underprice, and let much of the action take place in the secondary market.
- This is basically the status quo
- Artists and teams
  - Get less revenue, this is the "underpricing"
  - But get at least some of the benefits of appearing to set a low price
  - Some artists try to "have their cake and eat it too", diverting tickets to the secondary market through their promoters. This too is a modern version of the Corrupt Box Office practice I mentioned earlier and shouldn't be allowed
- Secondary markets and Brokers both clean up
  - Again with the nuance that brokers have to expend a lot of money and time seeking underpriced tickets, so the "marginal" one in some economic sense breaks even
  - And secondary markets of course spend a lot of money on internet advertising and otherwise to try to get the market to happen on their secondary market site rather than someone else's
- Fans ...
  - Well FANS HATE THE STATUS QUO.
  - There were 6724 comments submitted to the FTC.

## Choice 3: Low Prices, Ban Resale

### Implementation Details

- IDs, credit cards, or phones to tie ticket to buyer (analogy: plane tickets)
- Some scope for refund if plans change, with penalty fees (analogy: plane tickets)
- Speculator who buys N tickets could resell N-1 of them, “walk them in”, but this doesn’t scale. More like Dickens-era resale than Bots-era resale

Reference: Pascal Courty, “Ticket Resale, Bots, and the Fair Price Ticketing Curse”

Stakeholder	Effects
Artist / Team	<ul style="list-style-type: none"> <li>• Can set the price they want, including below-market</li> </ul>
Secondary Markets	<ul style="list-style-type: none"> <li>• HATE THIS.</li> </ul>
Brokers	<ul style="list-style-type: none"> <li>• HATE THIS.</li> </ul>
Fans	<ul style="list-style-type: none"> <li>• Pay “fair price”. The “free money” goes directly to them.</li> <li>• Some allocative inefficiency. Even if I really want to go, may not be able to. (Greg Mankiw \$2500 for Hamilton tickets).</li> </ul>

That's the  
**ticket**

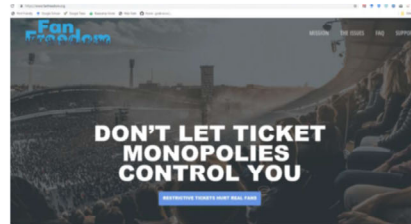


- Last but not least, Choice 3.
- Low prices, but with a ban on resale
- First, let’s talk through the implementation details for this approach
  - It relies on “names on tickets” with some sort of customer identifier, like an ID, a credit card, or their phone. By analogy, like how plane tickets work
  - Ideally, there would be some scope for refund for customers whose plans change, and can cancel far enough in advance that someone else can purchase and then utilize the ticket
    - Again, analogy is an airline fee
  - Since customers often attend events in groups, and groups can be fluid, there is intrinsically some scope for a form of resale – broker buys the tickets, then “walks the fans in the door”
    - However this doesn’t scale that much, its more like Dickens-era resale, or Spitzer-era resale, than Bots-era resale
  - A good reference on this idea is a recent paper of Pascal Courty
- What are the effects of this method on stakeholders
  - Artists and Teams
    - Can set whatever price they like, including a below-market price
  - Secondary markets and brokers
    - HATE this idea

- They probably hate it as much as fans hate the status quo
- Fans
  - Pay a “fair price”
  - Some still won’t get to buy – there is excess demand at that price
  - And there will be some allocative inefficiency
- Some fans who BADLY want to go and would have paid a lot won’t get tickets

# Politics of Choice 3

- Concentrated Interests oppose it
  - Secondary market players
  - Brokers
  - Arguably Ticketmaster, which has taken a “join the party” approach to the secondary market, now at ~\$2bn volume
- Dispersed Interests benefit
  - Fans
- Artists/Teams may have a loud-enough voice to effect change



## Part I Summary

1 Briefly describe the organization's mission or most significant activities:

THE MISSION OF FAN FREEDOM PROJECT IS TO PRESERVE, EDUCATE AND INFORM CONSUMERS OF THEIR FUNDAMENTAL RIGHTS RELATING TO ACCESS TO AND ATTENDANCE AT LIVE PUBLIC SPORTS, MUSIC, THEATRICAL AND OTHER EVENTS, INCLUDING RIGHTS TO A FREE AND OPEN SECONDARY TICKETING MARKETPLACE ALLOWING ALL CONSUMERS TO BUY, SELL OR SHARE TICKETS WHEN THEY WANT, WHERE THEY WANT, AND WITH AND TO WHOM THEY WANT; TO EDUCATE CONSUMERS ABOUT THESE RIGHTS, THREATS TO THESE RIGHTS, AND OPPORTUNITIES TO DEFEND OR PROMOTE THESE RIGHTS; AND TO CHALLENGE EFFORTS OF CONTENT OWNERS, VENUE OWNERS, TEAM OWNERS, EVENT PRODUCERS, TICKETING AGENCIES, AND GOVERNMENT LEGISLATIVE AND REGULATORY AGENCIES THAT INTENTIONALLY OR UNINTENTIONALLY SEEK TO INHIBIT THESE RIGHTS.

That's the  
**ticket**

- The politics of Resale Bans are, sadly, predictable
- Economically, they benefit a dispersed group, fans
- But harm a concentrated group, the secondary market players
  - This includes the secondary market platforms
  - Brokers
  - And arguably Ticketmaster, which has taken what you might call a “join the party” approach to the secondary market, now at around \$2bn volume which at their current fees is about \$500 million of revenue
- A group called the “Fan Freedom Project” got formed for the purpose of advocating against resale bans.
  - The name is almost comically Orwellian
  - I want to read you an excerpt from their non-profit filing,
  - The mission is to quote “Preserve, Educate and Inform Consumers of their FUNDAMENTAL RIGHTS “ ... “including rights to a free and open secondary ticketing marketplace”
- I love the cynicism, “Fundamental Rights”, right up there with life, liberty and the pursuit of happiness, to speculate on concert tickets
- I’ll let you guess who funded it



# Policy Proposal I

- Artists and Teams should have the CHOICE to restrict resale for some or all of their tickets



- My main policy proposal is that artists and teams should have the CHOICE to restrict resale for some of all of their tickets
- That is, if they want to set a meaningful below-market price, that should be a choice that they have

## Policy Proposal I, cont.

- “FREE MONEY” -> massive rent-seeking, broken market.
- Only 2 real alternatives to the status quo
  - 1) Set a market-clearing price (Taylor Swift, Rolling Stones)
  - 2) Set below-market prices, restrict resale
- I propose that artists/teams be free to choose their preferred mix of (1) and (2)
  - I suspect many will choose some of both
- I understand both (1) and (2) are bad for secondary-market players
  - You may hear some complaining ...
  - Chicago economists have a thick skin.



- Essentially there are only 2 real alternatives to the status quo
  - 1) set a market-clearing price
  - 2) set below-market prices, but restrict resale
  - Again, I like the idea of trying to deter bots and brokers in other ways, but that's ultimately a cat-and-mouse game, which the ticketing industry has been losing, in some cases perhaps purposefully, for over 100 years.
  - The only truly reliable ways to allocate tickets to fans and not brokers are to set market-clearing prices in the first place, or to restrict resale. That's just economic reality.
- What I am proposing is that artists and teams be FREE TO CHOOSE their preferred mix of these 2 alternatives
- I suspect many will choose just to set market-clearing prices, which again is standard economics, or to do a mix of (1) and (2), perhaps allocating some premium seats at high prices, but allocating the “get in the door” seats at low prices with resale restrictions
  - That's all fine. My proposal is NOT to mandate resale bans, but to MEANINGFULLY ALLOW them.
- I understand that resale bans are bad for secondary-market players and brokers. You may hear complaining, that's fine.

# Policy Proposal II

- **Fee transparency**
  - Fees are both OPAQUE and HIGH
  - In both the PRIMARY and SECONDARY markets
- **Proposal: adopt the DOT model**
  - **You have to show the all-in price, if the fee is mandatory (i.e., can't buy the ticket without paying the fee)**
- Note: firms will not “unilaterally disarm”
  - StubHub experiment shows that transparent fees, in the context of a market that is otherwise often non-transparent, is very costly
  - (Blake, Moshary, Sweeney and Tadelis, “Price Salience and Product Choice”)



That's the  
**ticket**

- My second policy proposal is more “conventional economics” if you will, which is just to have transparency for fees in this market
  - Fees are both OPAQUE and HIGH
  - In BOTH the primary market and the secondary market
- I propose that the tickets industry adopt the Department of Transportation model for the Airline industry – which is that if a fee is a “mandatory” part of the ticket, you have to include it in the displayed price
  - Airlines can't charge \$300 for the ticket, and then surprise you that it's another \$300 for the seatbelt and another \$100 bucks to use the bathroom.
- I want to underscore that the industry likely won't unilaterally disarm against opaque, high fees. Scientific evidence that came out of an experiment at StubHub found that if one marketplace makes fees transparent, while others keep them non-transparent, the transparent one did worse.
- Commissioner Slaughter called the situation a prisoner's dilemma – that's exactly right

# Concluding Thoughts

- The ticket market has been broken for a long time
  - The structural economic issue is artists/teams sometimes want to “underprice” their tickets relative to what the market will bear (fairness, PR, long-run economic interests, etc.)
  - This creates an incentive for rent-seeking behavior
- The internet has badly exacerbated the problem
  - Rent-seeking has gone haywire
  - For many events, the secondary market is now the market
- Two proposals that would do a lot of good to fix the market:
  1. Allow artists and teams the choice to restrict resale for some or all of their tickets.
  2. Fee Transparency. In both the primary and secondary market.

That's the  
**ticket**

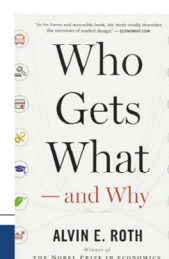
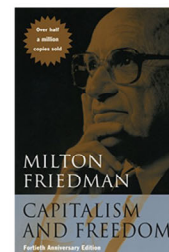


- Let me now bring this talk to a close, with one slide to summarize and one slide to put these ideas in a slightly broader economic context
- The ticket market has been broken for a LOOOONG Time
- The structural economic reason why is that artists / teams / etc sometimes want to “underprice” their tickets relative to the maximum the market will bear
  - This could be out of concerns about “fairness”, real or perceived
  - A concern that too high a price today will harm demand tomorrow
  - A desire to ensure that seats can make it to true fans
  - Etc.
  - Wherever it comes from, it's a fact of this market
- This underpricing in turn creates an incentive for rent-seeking behavior
  - Hence, \$30 in gold for a good spot in line, over a 150 years ago, for a novelist!
- The INTERNET HAS BADLY EXACERBATED this basic structural problem
  - The internet reduces friction, which is usually a good thing ...
  - but in this case the friction was what allowed the market to not get fully taken over by speculators
- I have outlined two proposals that would do a lot of good for this market, in the internet era
- 1<sup>st</sup>, allow artists and teams THE CHOICE to restrict resale for some or all of their tickets
  - Not a mandate to ban resale

- Indeed, I would imagine that most events would continue to price roughly the way they do, and for efforts to set market-clearing prices to get increasingly sophisticated and more accurate
- But, for special events where demand is through the roof, and the artist/team genuinely doesn't want to price to capture full revenue from that demand, that should be their CHOICE
- (If they want to price through the roof, that should be their right too!)
- (And if they want to price low and let the rents go to brokers/secondary market players, I guess that should be their right too. But we shouldn't FORCE them into this third bucket.)
- The 2<sup>nd</sup> proposal is to put some transparency into this market, specifically around fees, in both the primary and secondary markets.
  - The idea is not special to tickets market
  - Just good economics
  - The only sense in which the proposal is special to the tickets market is that tickets themselves are special. Consumers often genuinely badly want to go to a particular event. Events are "one of a kind" and create cherished memories, like the moment the mets clinched the pennant.
  - But this specialness then makes consumers vulnerable, and HIGH and especially OPAQUE fees exploit this vulnerability.

# Concluding Thoughts

- I want to close by connecting these two simple policy ideas to ideas that I've learned from two influential figures in the history of economic thought:
  1. Milton Friedman
    - “Free to choose”
    - “Rules of the game” as the role of government
  2. Alvin Roth
    - Market Design
    - Matching: some markets don't clear through price alone
- I think the tickets market may be one where we've learned, from 100+ years of history, that price alone may not be the only determinant of “who gets what”
- Whether artists/teams determine the allocation based on who pays the most, who's willing to wait in line, likes on Instagram, etc., it should be their choice.
- And whether in the cheap seats or front row, fans deserve a transparent market



That's the  
**ticket**

- I want to close by connecting the ideas in this talk to two influential figures in economics, from whom I've learned an enormous amount
- First is Milton Friedman
  - I've used the phrase “free to choose” a few times in this talk, which is a Friedman phrase. Artists and teams should be free to choose the nature of the contract they sell, within reason. Ticket resale is NOT A FUNDAMENTAL RIGHT.
  - Another important Friedman theme is that markets need rules to function well – the notion of Government as the rule-setter and umpire.
  - Let me read a famous quote of Friedman: “The role of government just considered is to do something that the market cannot do for itself, namely, to determine, arbitrate and enforce the rules of the game”
  - You may be surprised to hear a U of C economist before you encouraging the FTC to regulate a market, but that's a misunderstanding of Chicago economics. Markets need rules to function well, full stop.
- Second is Alvin Roth, my PhD adviser and winner of the 2012 Nobel Prize
  - Roth was recognized for his work on the design of what are known as matching markets.
  - He points out that while many markets clear through prices alone, many markets don't – price isn't the only determinant of “Who Gets What”

- Examples include getting into a college, choosing a spouse, or getting a job
  - You can't just choose which job you want, the employer has to choose you back
  - You can't just choose which college you want to go, the college has to choose you back. With the possible exception if you bribe the lacrosse coach.
- In the tickets market, we've learned, from 100+ years of history, that sellers, and buyers, don't want a market in which prices alone are always and everywhere the only determinant of who gets what.
- Whether artists and teams determine the allocation based on who they think is the "true-est" fan, or who pays the most, or who waits the longest in line, or whatever, it should be their choice.
- And whether in the cheap seats or courtside, fans deserve a transparent market