ECO 156, Fall 2026, Required Assignment #2
Applications to Market Failures: MBSs, Monopsony, and Car Insurance

Part I: Mortgage Backed Securities:

Q#1

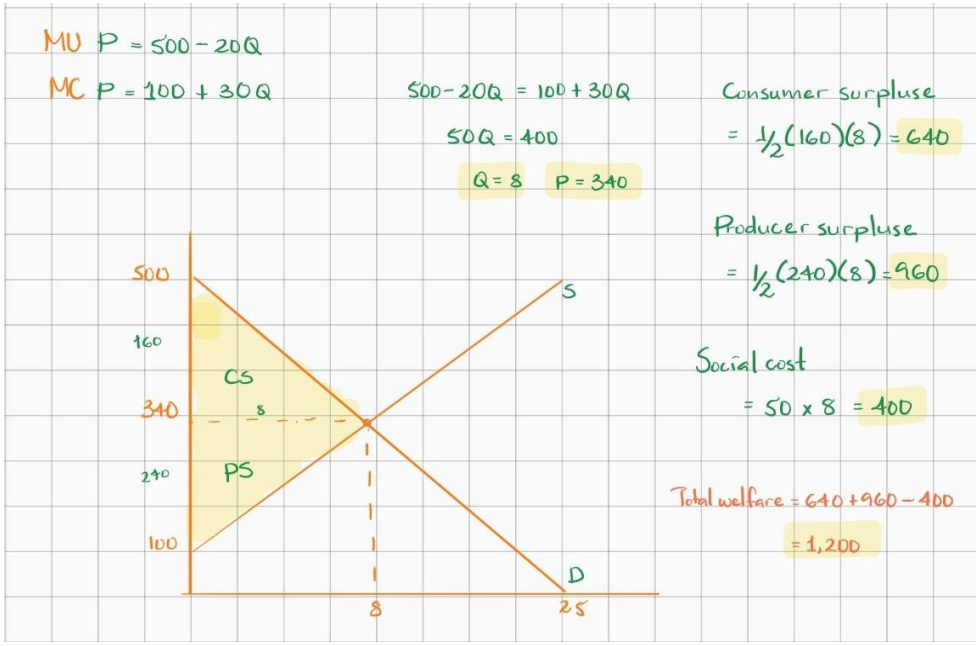
Mortgage backed security is a type of investment where investors buy securities from a big pool of mortgage loans. Every time a borrower pays their mortgage, the money directly goes to the investor who bought a piece from the pool. MBS links the housing market with different investment firms who in turn are linked to other economic actors. This created a systemic risk whereby a decrease in housing price affected every mortgage backed security holder because MBSs lost value. Even a small loss in mortgage is compounded to the entire system/economy. As a result, financial institutions suffered significant losses in the runup to the Global Financial Crisis.

Hence, systemic risk is a negative externality because while an individual actor may benefit from profits earned by issuing or investing in a risky enterprise, if something goes wrong, the risk taken by that firm imposes costs on every interconnected component, resulting in compounded costs (social costs) for all actors in the system.

A Guide to Understanding Mortgage-Backed Securities. (2025).

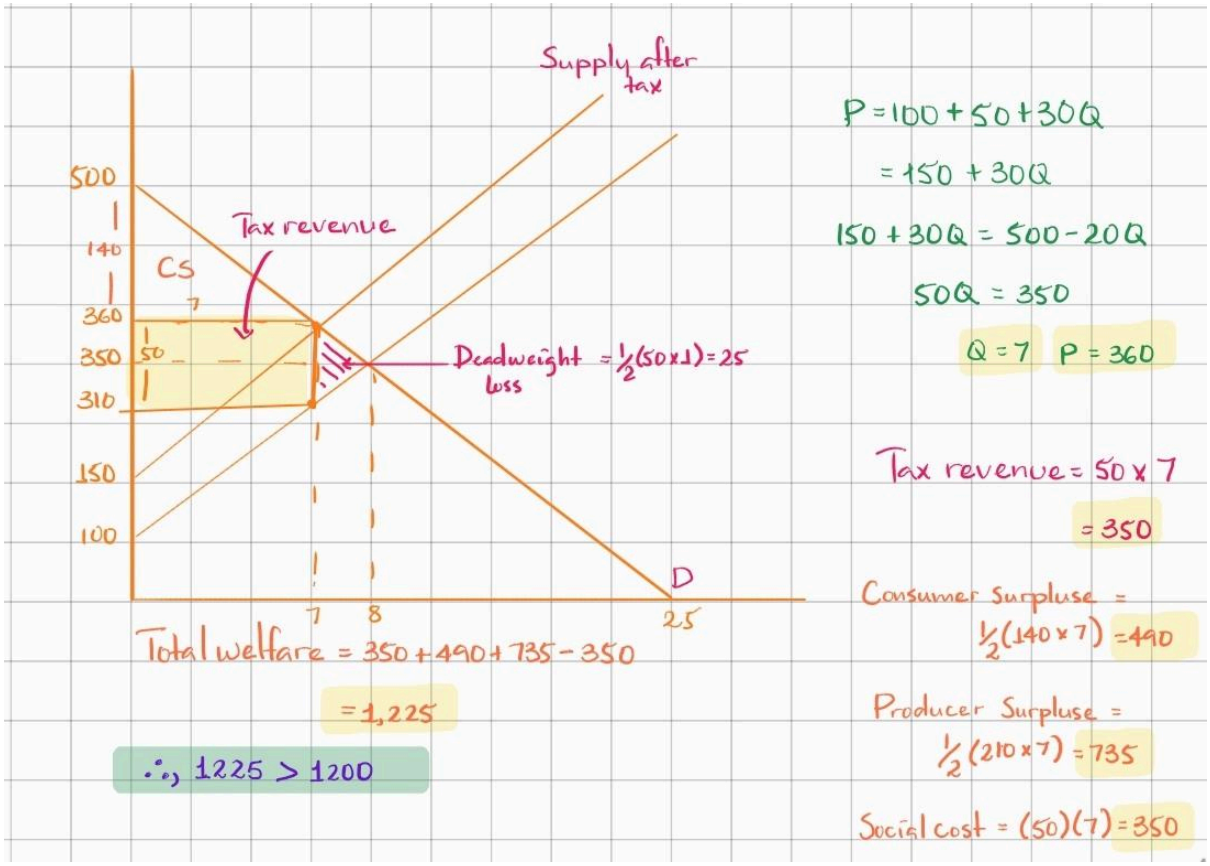
https://www.philadelphiafed.org/the-economy/banking-and-financial-markets/a-guide-to-understanding-mortgage-backed-securities

Q#2



Q#3

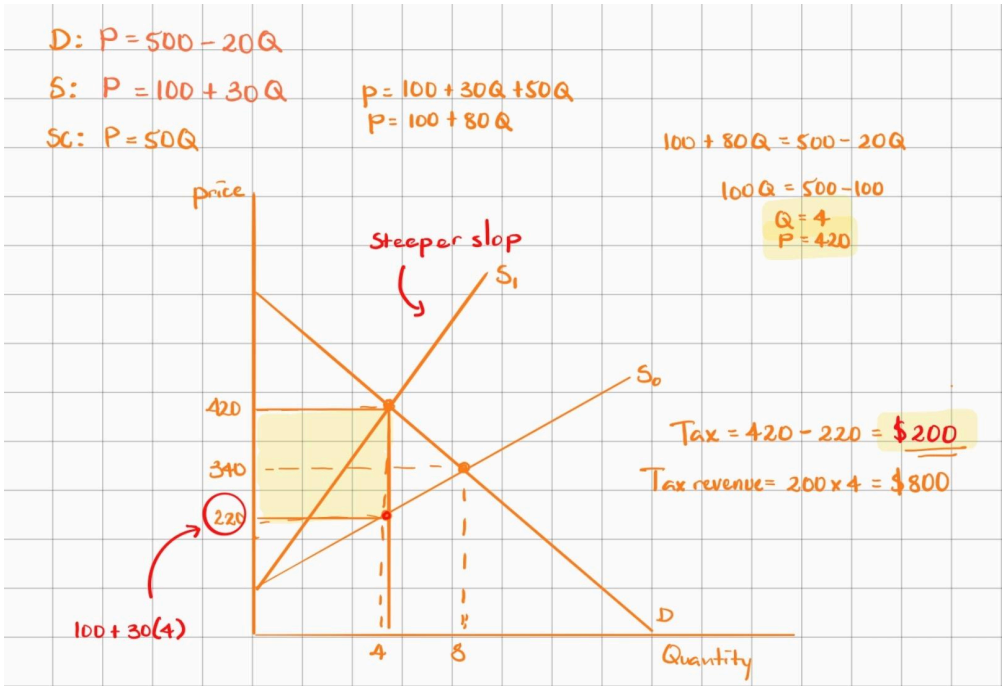
A distortionary tax of 50 applied to the producer's side. Total welfare in the corrected market is 1225 which is higher than 1200 in the uncorrected market, eliminating the 25 DWL.



Q#4

Instead of a constant marginal social cost of 50 per each additional unit, 50Q means the marginal external cost increases, or adds up, as the quantity produced increases. The marginal cost of the first unit is $50 but the marginal cost of the second unit is $100 and so on.

Tax that corrects for the externality of 50Q = $200



Part II: Monopsony:

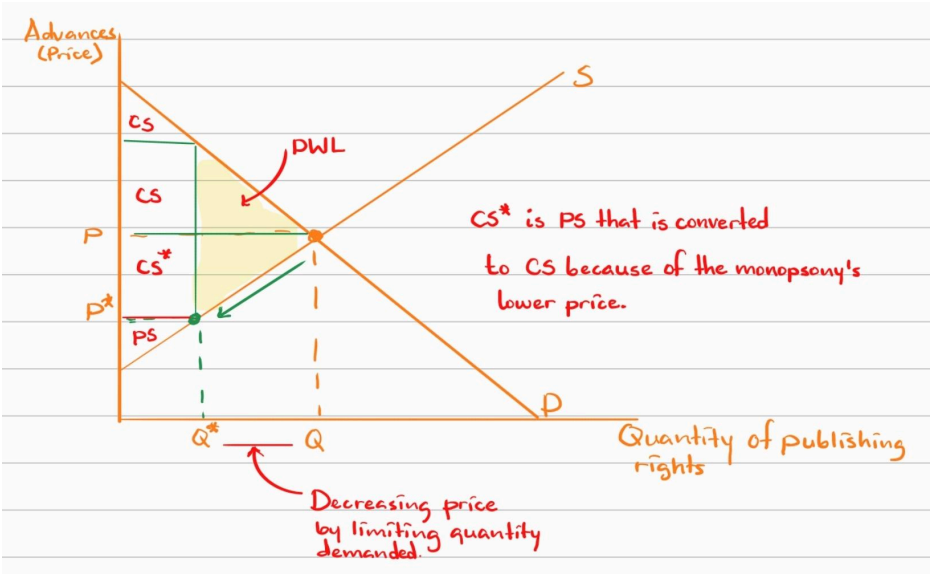
Q#5

The federal judge agreed with the Justice Department that the merger would reduce competition for high selling books and would harm authors by reducing the compensation/deal they get for selling out publication rights. The court justified this by an antitrust law under Section 7 of the Clayton Antitrust Act.
Justice Department obtains permanent injunction blocking Penguin. (2025, February 6).

https://www.justice.gov/archives/opa/pr/justice-department-obtains-permanent-injunction-blocking-penguin-random-house-s-proposed

Q#6

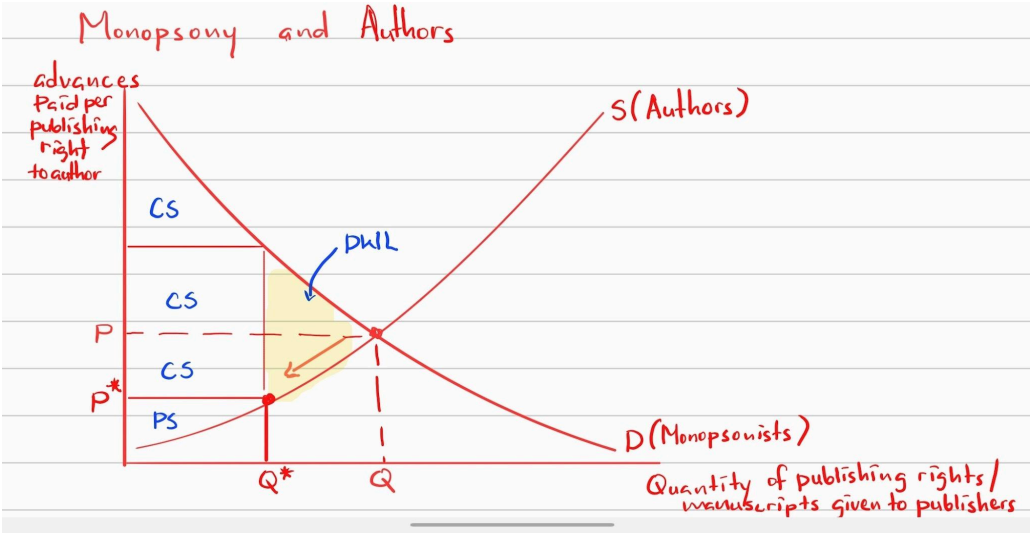
The merger would decrease competition by becoming a single most important/powerful demander for publishing rights. This decreases options and competing offers for authors and would force them to accept lower compensation (price) for publishing rights of their books. In this way, the merger could have acted like a monopsony.



Q#7

Vertical axis – advances/compensation paid by the publishing company to authors who grant or sell publishing rights for their book

Horizontal axis – quantity or number of publishing rights

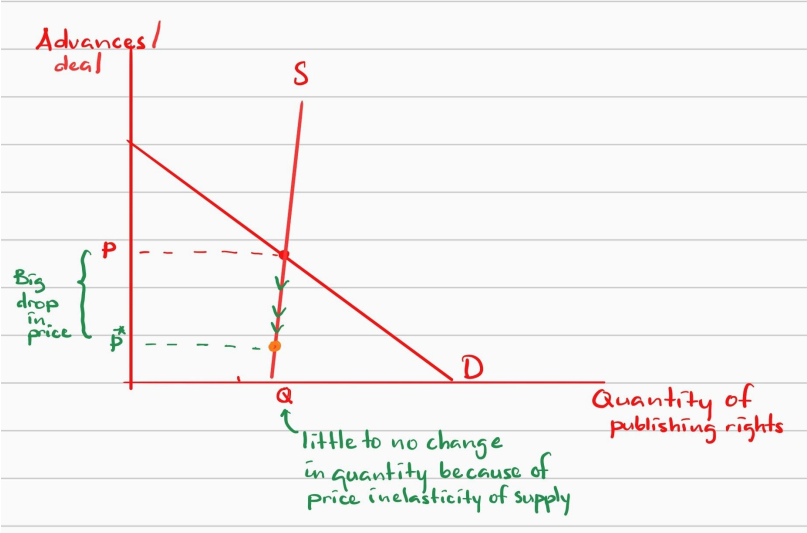


Not entirely. It could be a labor market in the sense that authors supply their work and publishers demand it. Authors sell publishers the right to sell a product of their labor (books) to the public in exchange for compensation (a deal). It wouldn't be a typical labor market because the publishing companies aren't hiring the authors, nor are the authors receiving wages.

Q#8

It would make it easier for a monopsonist because suppliers are willing to provide a specific quantity regardless of the price. This means, the monopsonist can simply get the same quantity for a very low price.

Price inelasticity of supply gives the monopsony the power to affect supply without worrying about decreasing quantity.



Part III: Car Insurance:

Q#9

Total = 200 people Low risk = 100 people High risk = 100 people

High risk - 9% risk Low risk - 1% risk

$\frac{9}{100}(1{,}000) = \$90$ $\frac{1}{100}(1{,}000) = \$10$

Total risk the insurer estimates = $100(90) + 100(10) = \$10{,}000$

Premium per driver = $\frac{10{,}000}{200} = \$50$

Q#10

Low risk drivers would opt out because given their 1% risk, the amount they're willing to pay ($10) is lower than the insurance premium asked of them. The amount they've to pay is inflated because of the high risk individuals in the pool. They simply won't be willing to pay $50 for a service they presume they're getting only $10 worth of benefit from. They're $40 worse off, so it would be logical for them to take the risk and leave the market.

Q#11

All states, except New Hampshire, have made auto-insurance a mandatory requirement to legally drive. This way, whoever wants to drive, high risk or not, is forced to stay in the insurance pool and pay premiums. This prevents the market from unzipping because of adverse selection.

Vincent, R. (2022, February 24). *49 of 50 states now require auto insurance policies*. NetQuote.

https://www.netquote.com/auto-insurance/states-require-auto-insurance-policies-754

Q#12

A simple strategy would be to set different premiums for different users based on their estimated risks. This way, drivers would be required to pay close to what they're willing to pay. As a result, they won't have an incentive to opt out. In this case, we would charge $10 for low-risk drivers and $90 for high risk drivers.