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What affects bank market power
in the euro area?

CONFERENCE ON "BANK REGULAT ON! CO" PET T ON AN# R $K%

- **1** 2i') 3rea'er in'e3ra'ion! con'es'a4ili'(5co. -e'i'ion s)ould increase and di//erences across coun'ries s)ould reduce
- **1** Financial crises and econo. ic recession si3ni/ican'l(a//ec'ed ')e -rocess o/ in'e3ra'ion in ')e euro area
- **1** T)e 4an6in3 union announce. en' in 2+12 re&i&ed ')e 'rend 'o7ards 3rea'er in'e3ra'ion
- **1** ECB (2+1,) su33es'ed ')a' recen' "-os' crisis rein'e3ra'ion 'rend% is . ainl(dri&en 4(con&er3ence in e8ui'(re'urns and! 'o a lesser e0'en'! 4ond (ields and re'ail 4an6in3 . ar6e's

$ource9 ECB (2+1,) Financial n'e3ra'ion in Euro-e! " a(:
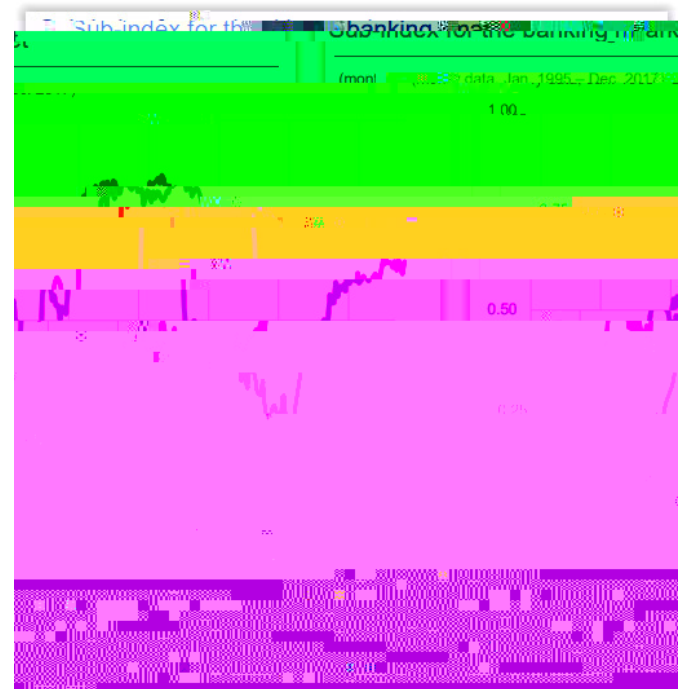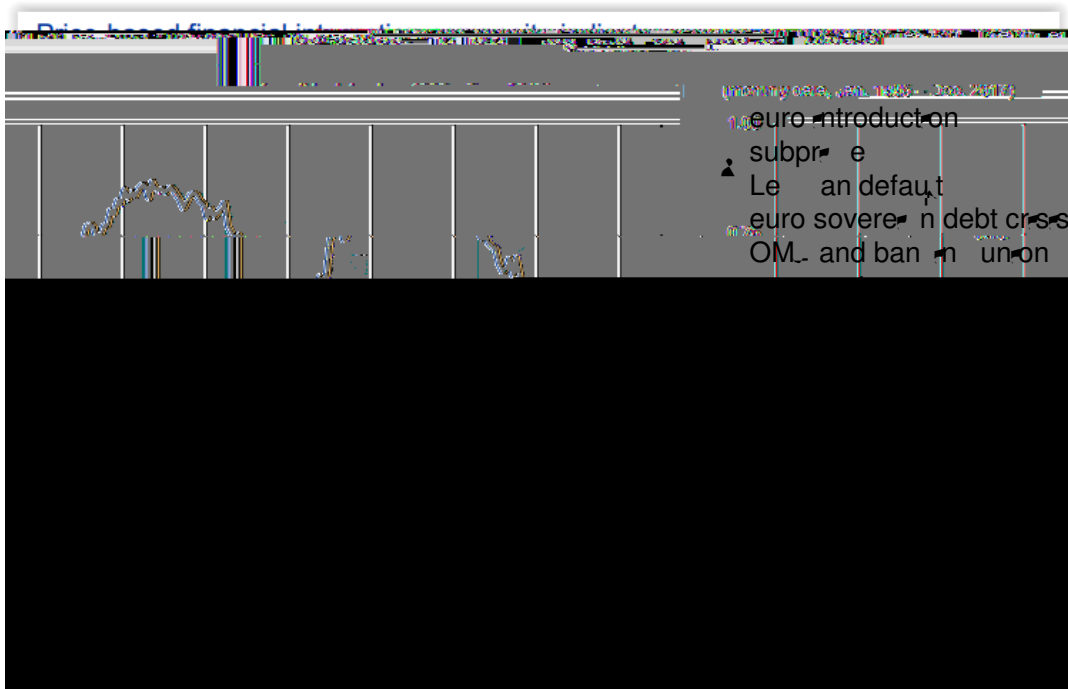
- Lar3e 4od(o/ li'era'ure . easurin3 co. -e'i'ion use s'ruc'ural ($CP) and . ore recen'l(non;s'ruc'ural (NE O) a--roac)es (e:3: Claessen and Lae&en! 2++<)

- $o. e recen' s'udies (e:3: 2eill! 2+1=> A-er3is e' al:! 2+1?> Cru@ e' al: 2+1A) /ocus on e&olu'ion o/ co. -e'i'ion in ')e EU

- Findin3s s)o7 ')a' co. -e'i'ion)as s'ar'ed sli3)'l(i. -ro&in3 onl(in ')e . os' recen' (ears (a/'er 2+1+): T)ere is so. e e&idence o/ con&er3ence across coun'ries

- On ')e /ac'ors a//ec'in3 . ar6e' -o7er! usuall(')e /ocus is on ')e crisis: Pre;crisis EU s'udies '(-icall(/ind ')a' si@e! e//icienc(and ')e econo. ic c(cle are si3ni/ican' e0-lana'or(&aria4les> /or concen'ra'ion resul's are . i0ed (e:3:! " audos e' al 2++A)

- Co. . on . e')ods9 /ro. $CP 'o (. ore recen'l() Lerner! Boone! B;s'a'is'ic

- T)ere are no recen' s'udies on ')e euro area usin3 o')er . e')ods

1 To e0-lore /ac'ors a//ec'in3 4an6 . ar6e' -o7er and loo6 a' 'rends o&er ')e . os' recen' (ears

1 To e. -lo(')e Bresna)an;Lau . ar6;u- 'es' de&elo-ed in ')e con'e0' o/ ')e NE O 7i') &aria'ions

1 To c)ec6 7)e')er ')ere)as 4een a . o&e. en' 'o7ards in'e3ra'ion! i:e: a reduc'ion o/ ')e di//erences in . ar6e' -o7er across coun'ries and a -rocess o/ con&er3ence

In country c at time t, profit-maximizing banks choose their output level q (loans) where MR = MC:

- In a perfectly competitive market within firms, MR coincides with P:
- In case of perfect collusion among the n firms, MR is equal to the MR of the whole market:

$$Q_{ct} = Q_{ct}(P_{ct}, X_{ct},)$$

where

Q_{ct} = aggregate level of loans
P_{ct} = interest rate on loans charged by local banks
X_{ct} = vector of exogenous variables shifting the demand curve
= vector of unknown parameters to be estimated

!

T)e indus'r(Is <u>true</u> . ar3inal re&enue /unc'ion is ')e 7ell;6no7n MR /or. ula /or a . ono-ol(9
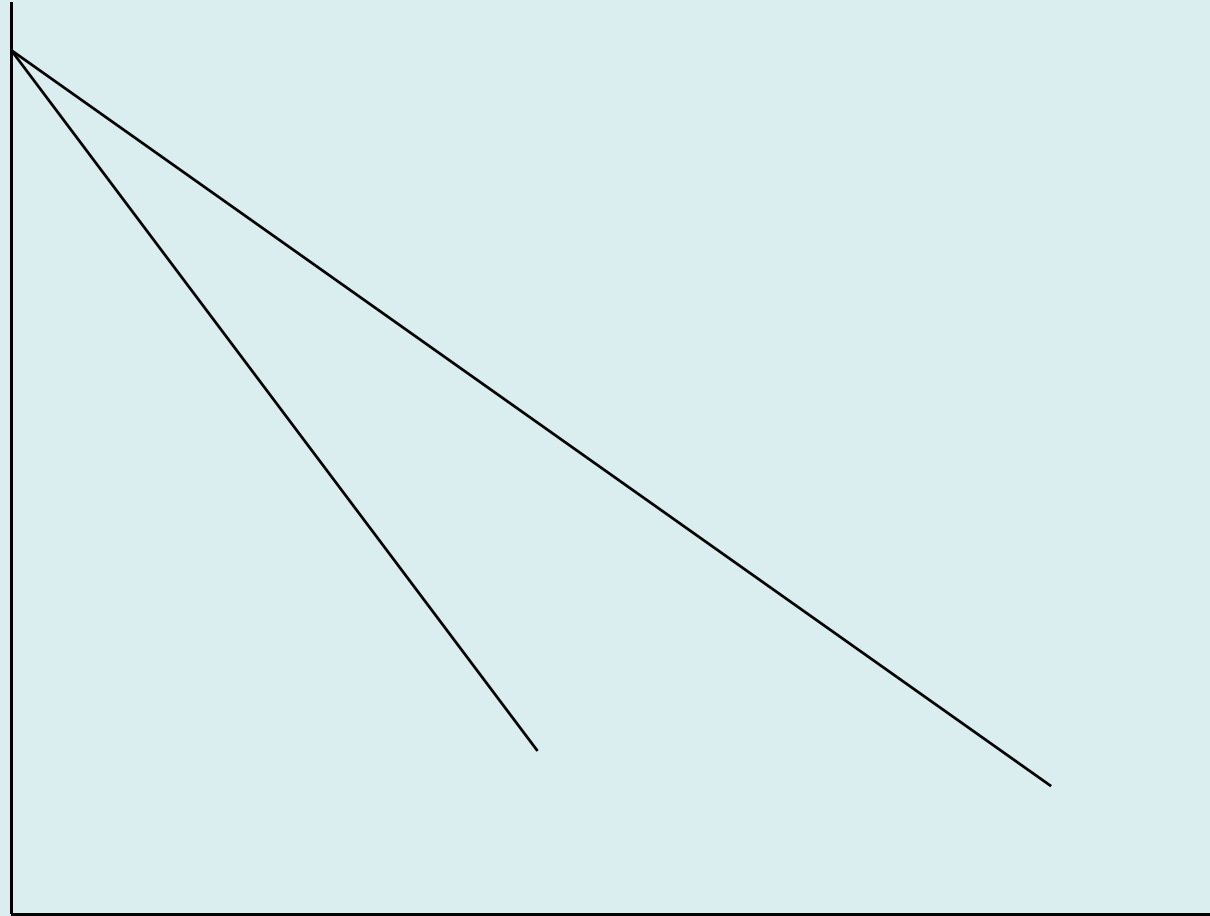
$$MR = P + \frac{\partial P}{\partial Q} Q$$

Bere i' can 4e 7ri''en as

$$MR_{ct} = P_{ct} + Q_{ct} \left/ \frac{\partial Q_{ct}}{\partial P_{ct}} \right.$$

T)e /ir. Is <u>perceived</u> . ar3inal re&enue /unc'ion /or ')e 3eneric 4an6 i o-era'in3 in coun'r(c! and su--l(in3 ')e 8uan'i'(o/ loans q_{ict}! is

$$MR_{ict} = P_{ct} + \lambda_{ict} \, q_{ict} \left/ \frac{\partial Q_{ct}}{\partial P_{ct}} \right.$$

7)ere λ_{ict} ('o 4e es'i. a'ed) is the competitiveness of oligopoly conduct:

%   &

A/'er a33re3a'in3 /or ')e n 4an6s in ')e . ar6e'! ')e MR **C** MC condi'ion 4eco. es

$$P_{ct} + \lambda_{ct}\, Q_{ct} \left/ \frac{\partial Q_{ct}}{\partial P_{ct}} \right. = MC_{ct}$$

E. –iricall**(! 7**i**')** re/erence 'o ')e **4**e**)**a&ioural –ara. e'er λ_{ct}**! 7**e es'i. a'e two different specifications of the two equation system**9**

1 λ_{ct} (**')**e cus'o. ar**(** Bresna**)**an;Lau . ar**6**;u– 'es'**)**

1 λ_{ct} as a /unc'ion o/ ')e   **4**an**6**in**3** . ar**6**e' c**)**arac'eris'ics

ⁱ ( )

' -ro&ides an easily interpreted test statistic

' allo**7**s to use aggregate industry data

T)e . odel does not rely on any particular definition of local

banking markets **7**i')in a coun'r((')e es'i. a'e o/ λ

re-resen's ')e a&era**3**e de**3**ree o/ . ar**6**e' -o**7**er o/ ')e **4**an**6**s

across ')ose se-ara'e . ar**6**e's)

T)e es'i. a'ion o/ ')e . ar**6**e' -o**7**er -ara. e'er is not biased**!**

4ecause our sa. -le s-ans co. -le'e . ar**6**e's ra')er ')an onl(

a su**4**se' o/ ')e rele&an' indus'ries

%   "   -

a) **7**i**')** a constant lambda>

4) **7**i**')**

	Model 1		
	Coef.	z	
Constant	-2.8487	-8.47	***
P	-0.2080	-6.49	***
POP	0.0539	23.20	***
Z	0.1010	4.61	***
YPERCAP	0.0392	7.28	***
R^2	0.7923		
Obs.	155		

P

15

10

MC MC
Parsehene

0.302   0.203   0.01   0.06   0.07   0.08   0.09

MR

-10
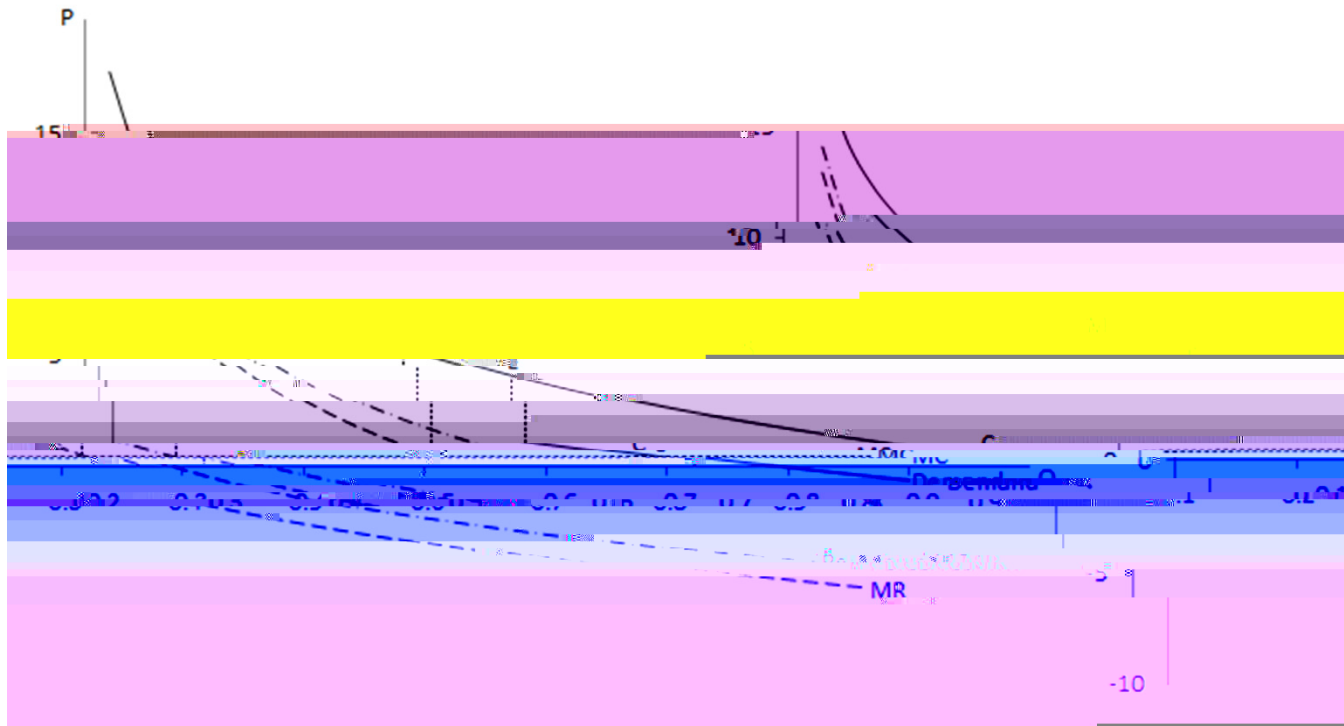
	Model 2	
	Coef.	z
Demand equation		
Constant	-3.0282	-9.15 ***
P	-0.1863	-5.77 ***
POP	0.0542	23.25 ***
Z	0.1092	4.96 ***
YPERCAP	0.0411	7.70 ***
Marginal cost equation		
Constant	-1.0379	-4.21 ***
lnQ	0.0701	3.62 ***
lnW1W3	0.1895	5.97 ***
lnW2W3	-0.3399	-4.82 ***
lnTIME	-0.0562	-2.11 **
Lambda constant	0.3093	2.10 **

CR5

T)e coe//icien's in 4o') ')e de. and and ')e . ar3inal cos' e8ua'ions do no' si3ni/ican'l(c)an3e:

Market power determinants
4 CR! market power is directly linked with local market concentration (con/or. in3 'o ')e $CP –aradi3.)! al')ou3) a' a 1+K le&el o/ si3ni/icance>
4 56Q76''6–% a higher deposits8assets ratio helps to mitigate rivalry among banks>
4 5&9&R' (& . ore le&era3ed (i:e: less ca–i'ali@ed) 4an6s enLo(a lower degree of market power>
4 –1–: 4an6in3 . ar6e's 7i') no'a4l(lar3e 4an6s are c)arac'eri@ed 4(higher market power>
4 ' –MP&RC' P /inancial inclusion increases competition in the banking industry:

CR**!** → not significant

56Q76''6-% → significant and equal to ; **0*<** (i:e:**!** a 1+**K** increase in **')**e de-osi's 'o asse's ra'io causes an increase o/ a**4**ou' **AK** in **')**e &alue o/ **')**e in'eres' ra'e c**)**ar**3**ed 'o cus'o. ers **4(4**an**6**s)

5&9&R' (& → significant and equal to ; **0.** ; (i:e:**!** a 1+**K** increase in **')**e e**8**ui'**(.** ul'i-lier ra'io **3**enera'es a -rice dro- o/ a**4**ou' =**K**)

-1-: → significant and equal to ; **0=**; (i:e:**!** a 1+**K** increase in **')**e ra'io **4**e'**7**een **')**e asse's o/ **')**e **F** lar**3**es' **4**an**6**s and G#P increases -rice **4(2K**)

'-MP&RC' P → significant and equal to ; **0=>** (i:e:**!** increasin**3** AT''s **4(** 1+**K** causes a /all o/ **')**e -rice o/ 2:<**K**)

&" "
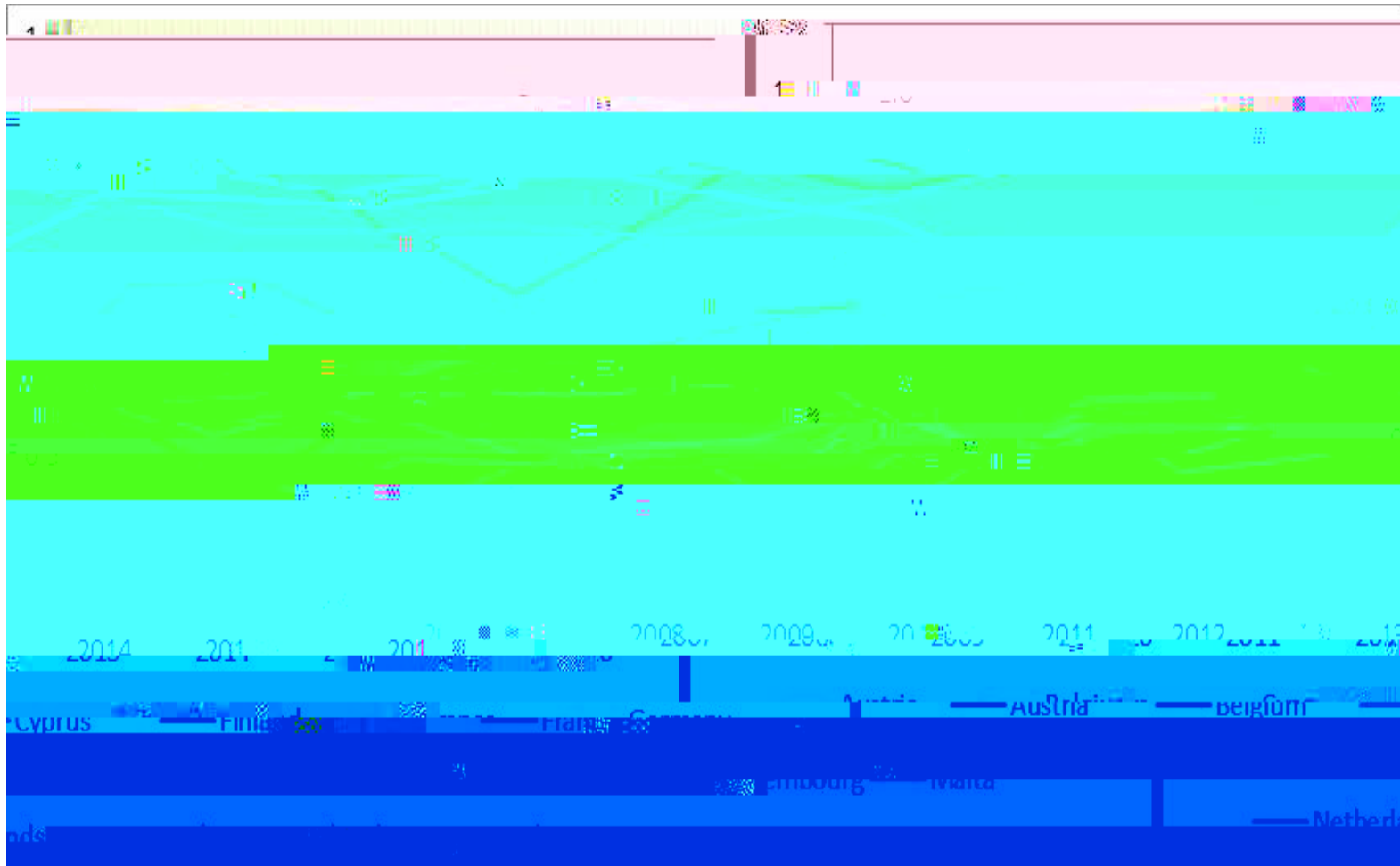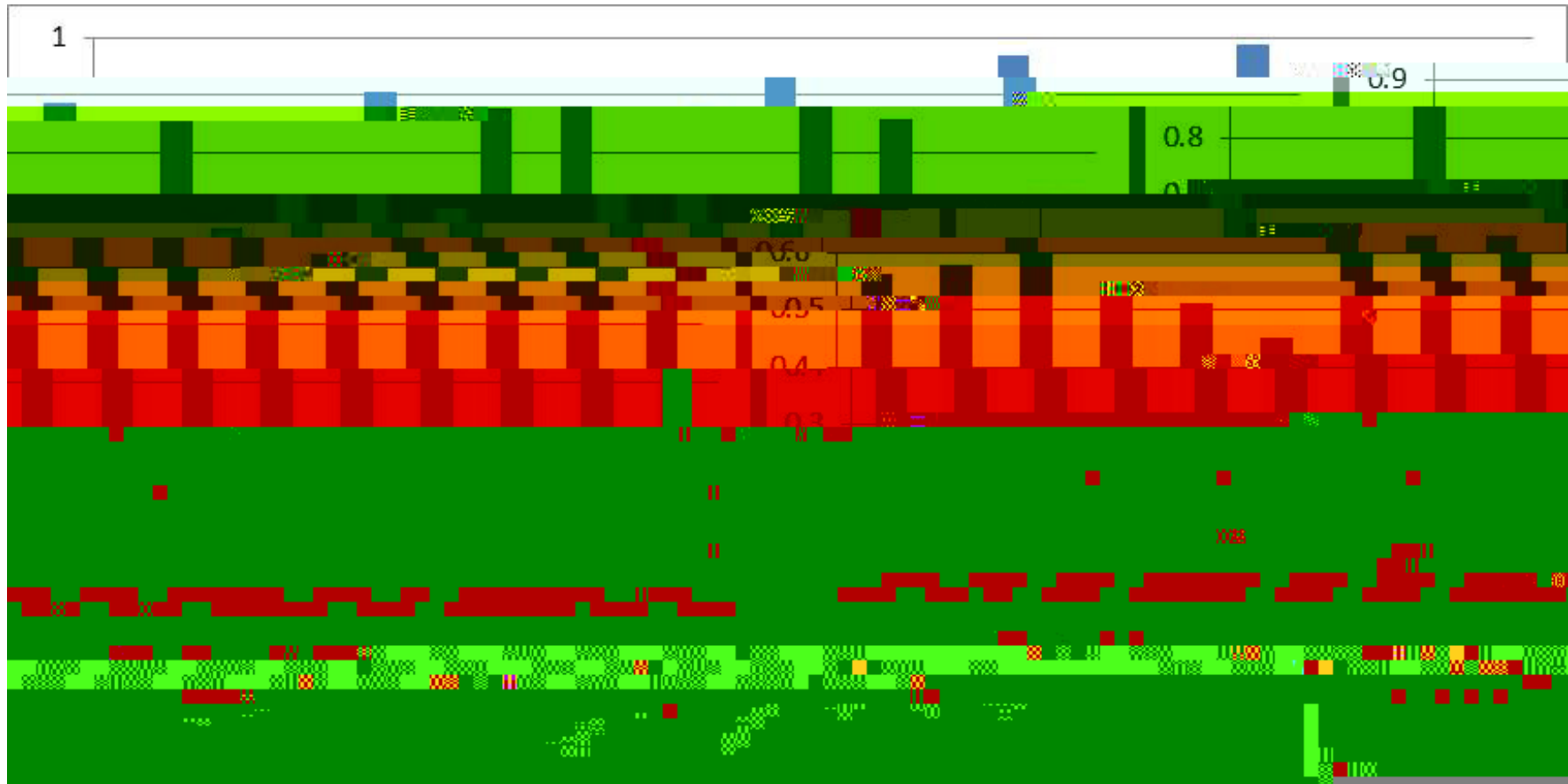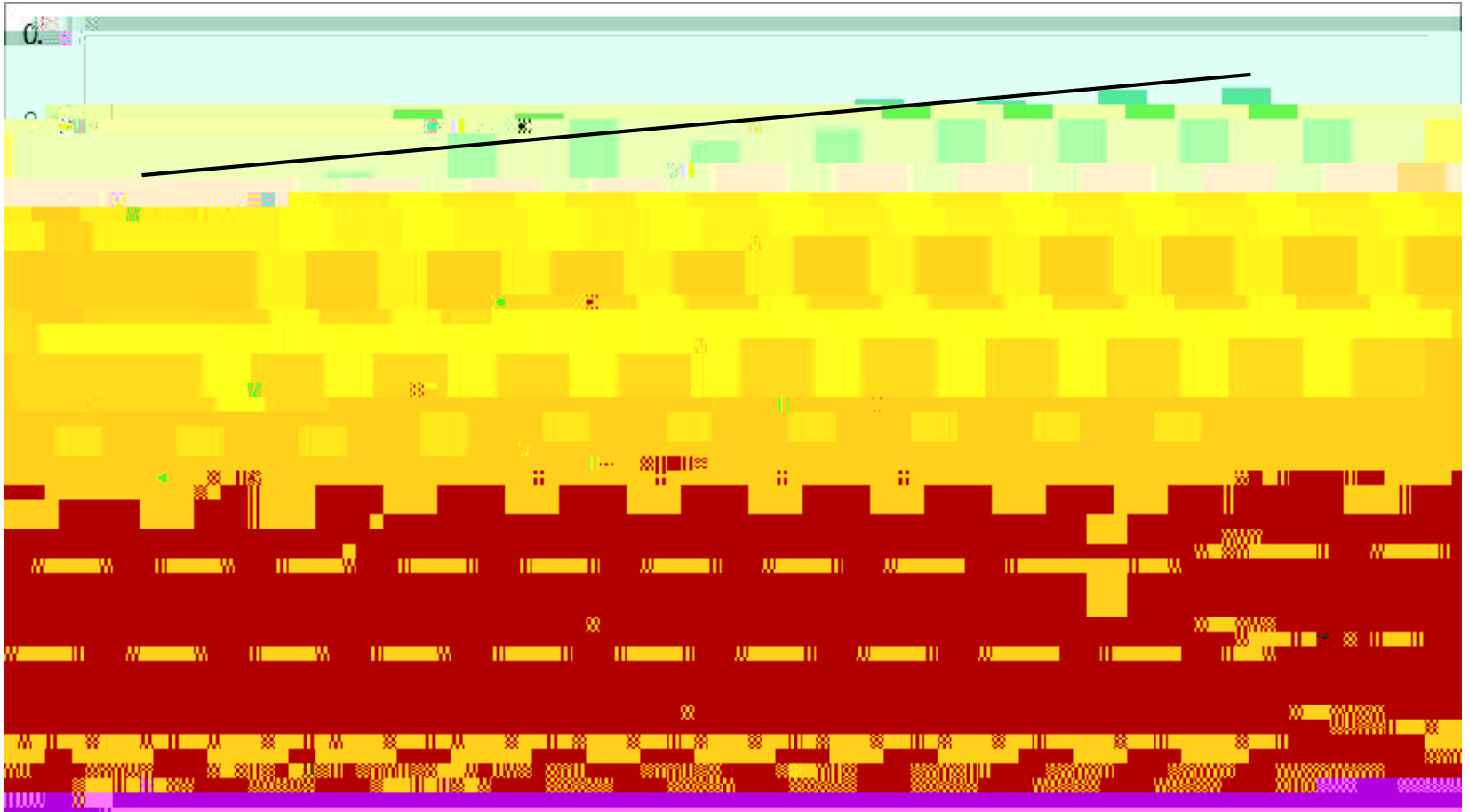
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		#	9 : !	; /<<1$
	1			

1 2e e. -lo(')e . ar6 u- 'es' de&elo-ed in ')e con'e0' o/ ')e NE O and /ind ')a'

   N 2)ere la. 4da is assu. ed cons'an'! i' is **C +:A?+<** 4an6s) -ercei&ed **"R**)as 4een a4ou' **A?K** o/ ')e **"R** ')a' **7**ould 4e 'a6en in'o considera'ion 4(a . ono-olis'ic