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## The effects of changes to housing benefit in the private rented sector

Robert Joyce, Institute for Fiscal Studies

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From joint work with Mike Brewer, James Browne, Carl Emmerson and Andrew Hood, for the Department for Work and Pensions, published at <http://www.ifs.org.uk/publications/6697> and <http://www.ifs.org.uk/publications/7277>



# Motivation

- Targeted subsidies for housing are an important part of the redistributive programs of modern welfare states
  - Social housing a very important element
  - But UK also spends £10 bn (0.5% of GDP) subsidising rents for 1.7m low-income private renters, through housing benefit (HB)
- A key question is over the economic ‘incidence’
  - Who benefits from rent subsidies: tenants or landlords?
- Depends on knock-on effects of subsidies on market rents

# What should we expect rent subsidies to do?

- In a private market this should depend on relative elasticities of supply and demand for privately rented housing
  - E.G. Supply unresponsive → rent levels adjust one-for-one with subsidy changes
  - Should also depend on share of market taken up by subsidy recipients
- Previous empirical literature suggests significant proportion of housing subsidies is incident on landlords
  - eg. Gibbons and Manning (2006) estimate that 60% to two-thirds of 1990s cut to UK HB was incident on landlords through lower rents
- But every market is different and rental sector has changed hugely

# Key empirical issues

- Challenge is identifying convincing counterfactual – what would rents have been in the absence of (changes to) housing subsidies?
- One approach is to exploit a reform, and compare rents among those affected and a valid control group
  - Difficult when subsidy reforms affect non-random subset of claimants
  - Need to worry whether reform also affects rents of control group
- Alternative is to assume that pre-reform trend in rents would have continued in absence of reform
  - Stronger assumption about changes in rents over time
  - But no need to worry about validity of control group

# Our contribution

- We look at whether cuts to Local Housing Allowance (HB for private tenants) in 2011 and 2012 reduced rent levels
- All new claimants affected in April 2011
  - Estimate effects on rents by using pre-reform trend as counterfactual
- Existing claimants rolled onto new system over course of 2012, with month of rollover defined by claim start date
  - Estimate effects on rents using those not yet rolled over as controls
- Both strategies give similar estimates – about 90% of the reduction in HB incident on tenants rather than landlords
  - ie. rents fell by 10% of the size of the HB cut

# Policy context: overview

- HB spending on private tenants has grown particularly rapidly
  - More than doubled in real terms since early 2000s
  - 70% of increase explained by rising claimant count
- Most private tenants now subject to LHA rules
  - Around 1 million recipients in 2010-11, with total spending of £6.4bn
  - Average award pre-reform about £120 per week
- Reforms evaluated (announced in June 2010) expected to reduce spending by £1.3bn in 2015-16
  - Part of overall cuts to benefit spending of nearly £17bn
  - “Purpose of reform is to influence rent levels and housing choices”

# Policy context: pre-reform LHA awards

- Maximum (pre-means test) entitlement (LHA rate) varies by Broad Rental Market Area (BRMA) and family type
- Each BRMA had ‘shared accommodation rate’, and 1,2,3,4 and 5-bedroom rates
  - rates set at median of rents for non-HB private properties
- Applicable room rate a function of family composition
  - shared rate applicable if in shared accommodation or single, childless and under 25
- If rent below LHA rate, could keep £15 per week of the excess
  - i.e. Weekly LHA =  $\min(\text{applicable LHA rate}, \text{rent} + £15)$

# Policy context: details of reforms

- Five cuts to LHA awards
  1. LHA rates based on the 30<sup>th</sup> percentile of rents in a (local area x bedrooms) cell, not the median
  2. £15 excess removed
  3. 5-room rate abolished
  4. National caps on room rates: £250, £250, £290, £340, £400 p/w for shared, 1-4 rooms respectively
  5. Shared accommodation rate applies if single, childless and under 35 (previously 25)
- Removal of excess affected existing claimants nine months before other reforms (Apr 11 – Mar 12 rather than Jan – Dec 12)



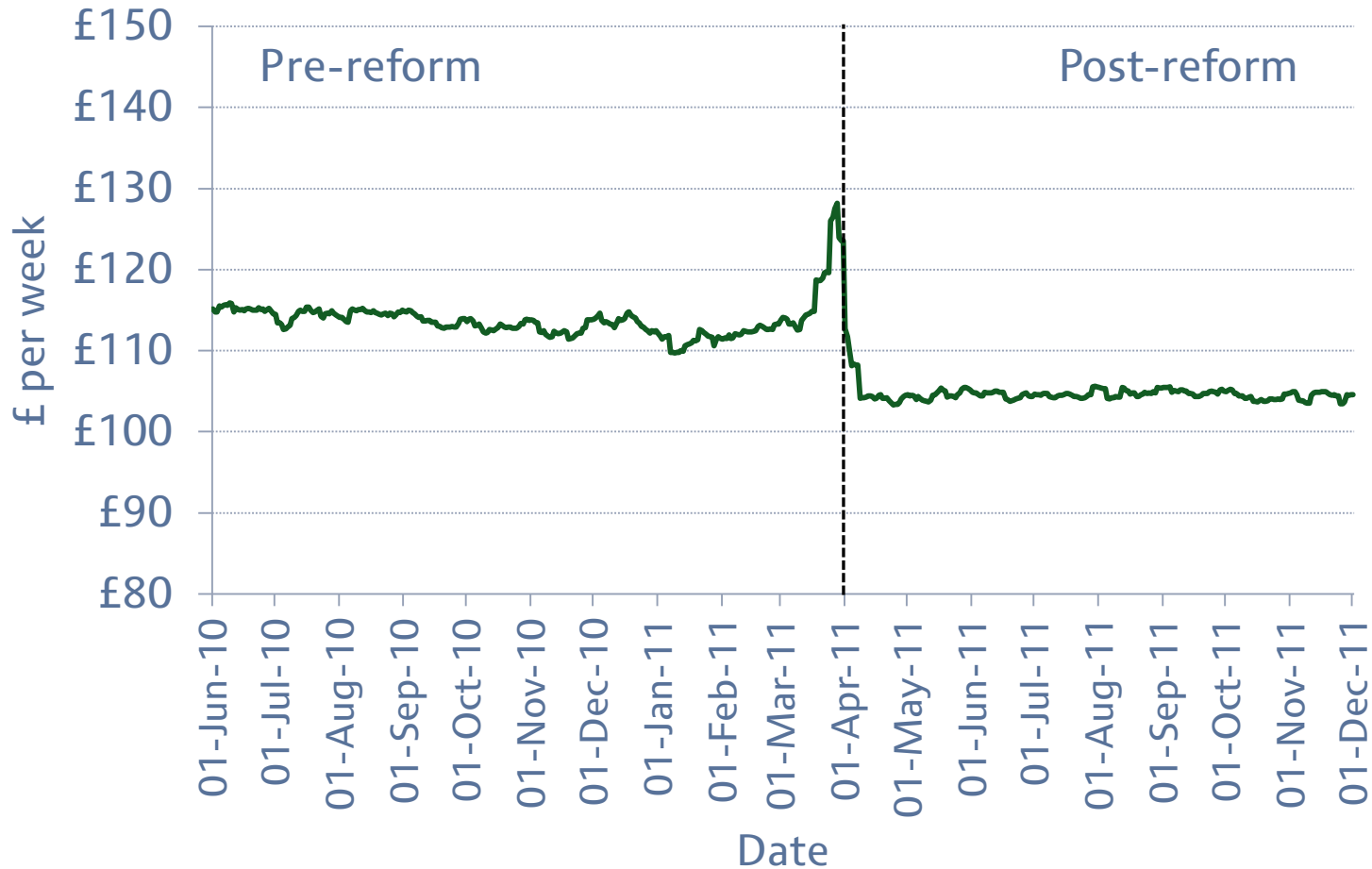
## Reforms to LHA weekly awards: examples

	Pre-reform LHA rate	Post-reform LHA rate
Couple with two children under 10 in Greater Glasgow	£126.92	£115.38
Couple with 2 children over 16 and 2 11-16s of opposite sex in Leeds	£335.00	£173.08
Lone parent with one child in Central London	£550.00	£290.00

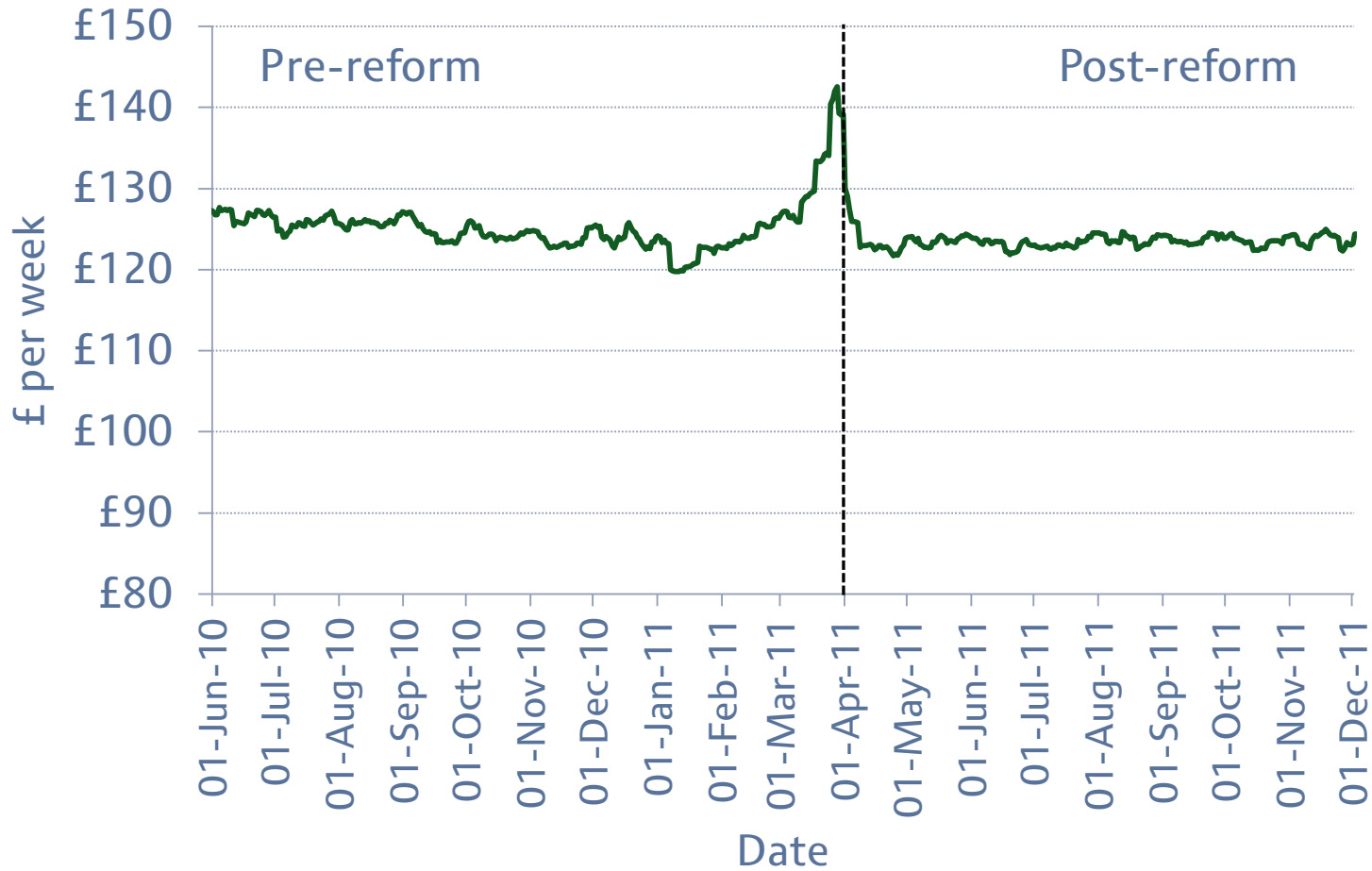
# Data: Single Housing Benefit Extract (SHBE)

- Administrative panel data on all HB claims in GB
  - Central database of monthly scans of Local Authority systems
  - (Roughly) monthly observations from January 2010 to November 2013
  - Key variables include contractual rents, LHA amounts, BRMA, LHA bedroom entitlements, actual number of bedrooms, family type, age
- For new claimants, use first observation for all claims starting between April 2010 and November 2011
  - 50,000 -60,000 observations (ie. new claims) a month
- Analysis of existing claimants based on ‘stock’ in January 2011
  - Use monthly observations from January 2010 to November 2013
  - 240,000 claimants, observed an average of 28 times (1 in 3 sample)

# Average LHA entitlement of new claimants (7-day moving average)



# Average rent of new claimants (7-day moving average)



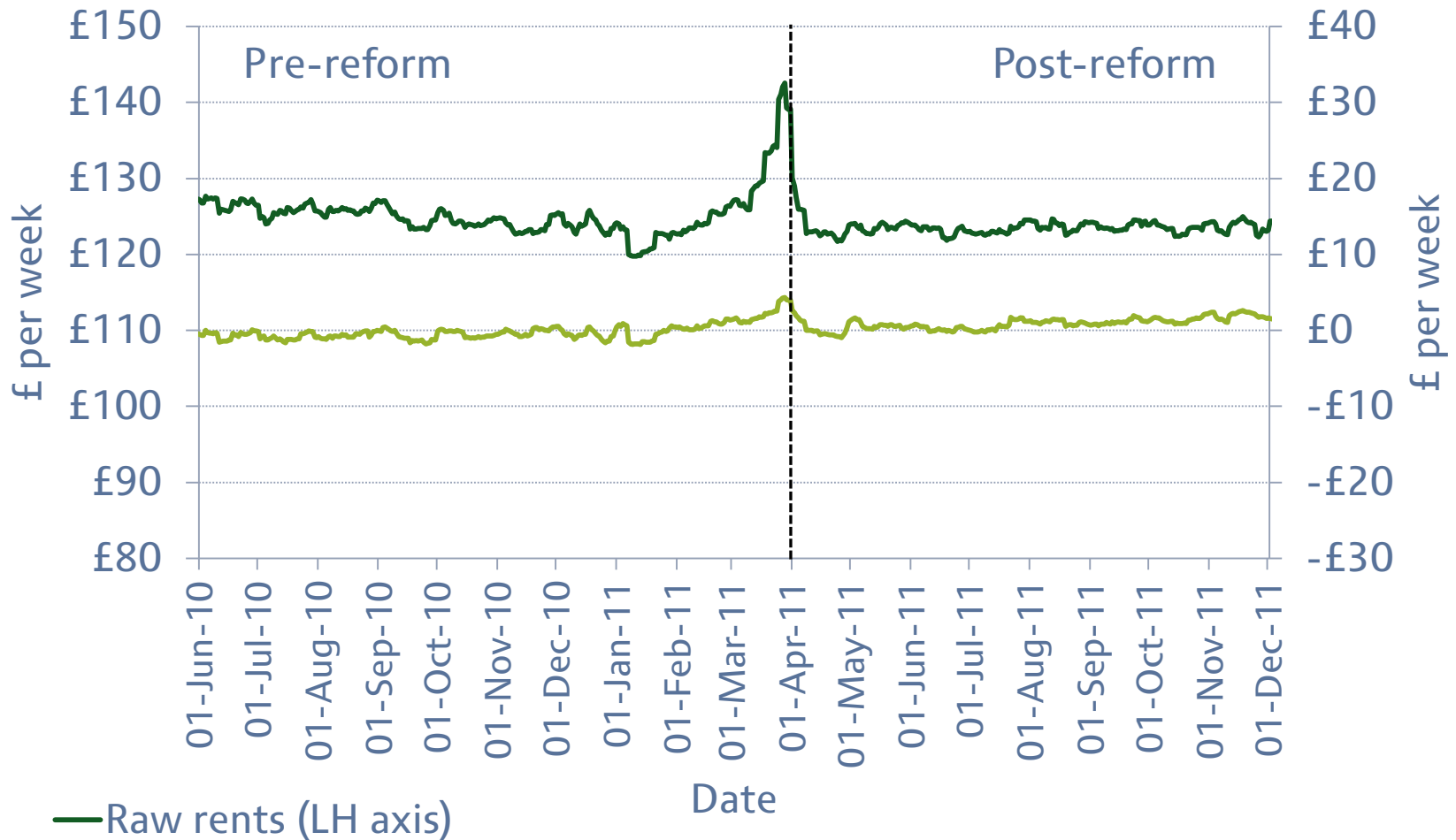
# New claimants: descriptives

- HB entitlements broadly flat pre-reform; clearly settle at a lower level after April 2011
- But little difference in rent levels before and after reforms
  - Indicative of our formal regression results on incidence
- Large spike in both entitlements and rents just before April 2011
  - Consistent with financial incentives created by reform
  - New claims in late March not subject to cuts in full for 21 months while those in early April subject straight away
  - Those most affected (higher rents/entitlements) more likely to respond, by claiming earlier and/or ‘manufacturing’ a new claim

# New claimants: methodology

- Can explain most of the spike with controls for property type, but not all of it

# Average rent of new claimants (7-day moving average)



— Raw rents (LH axis)

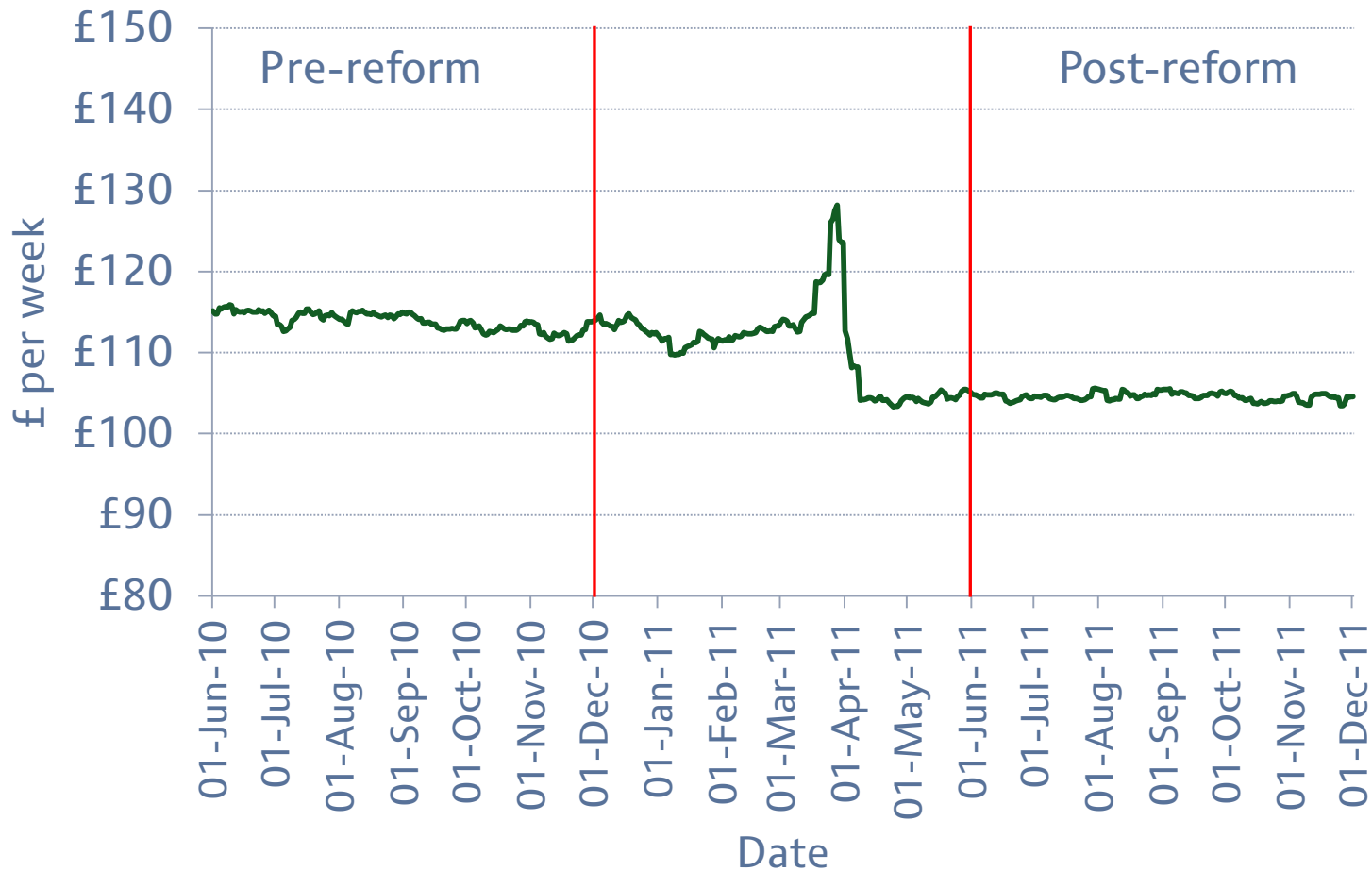
— Component not predicted by BRMA or number of bedrooms (RH axis)

# New claimants: methodology

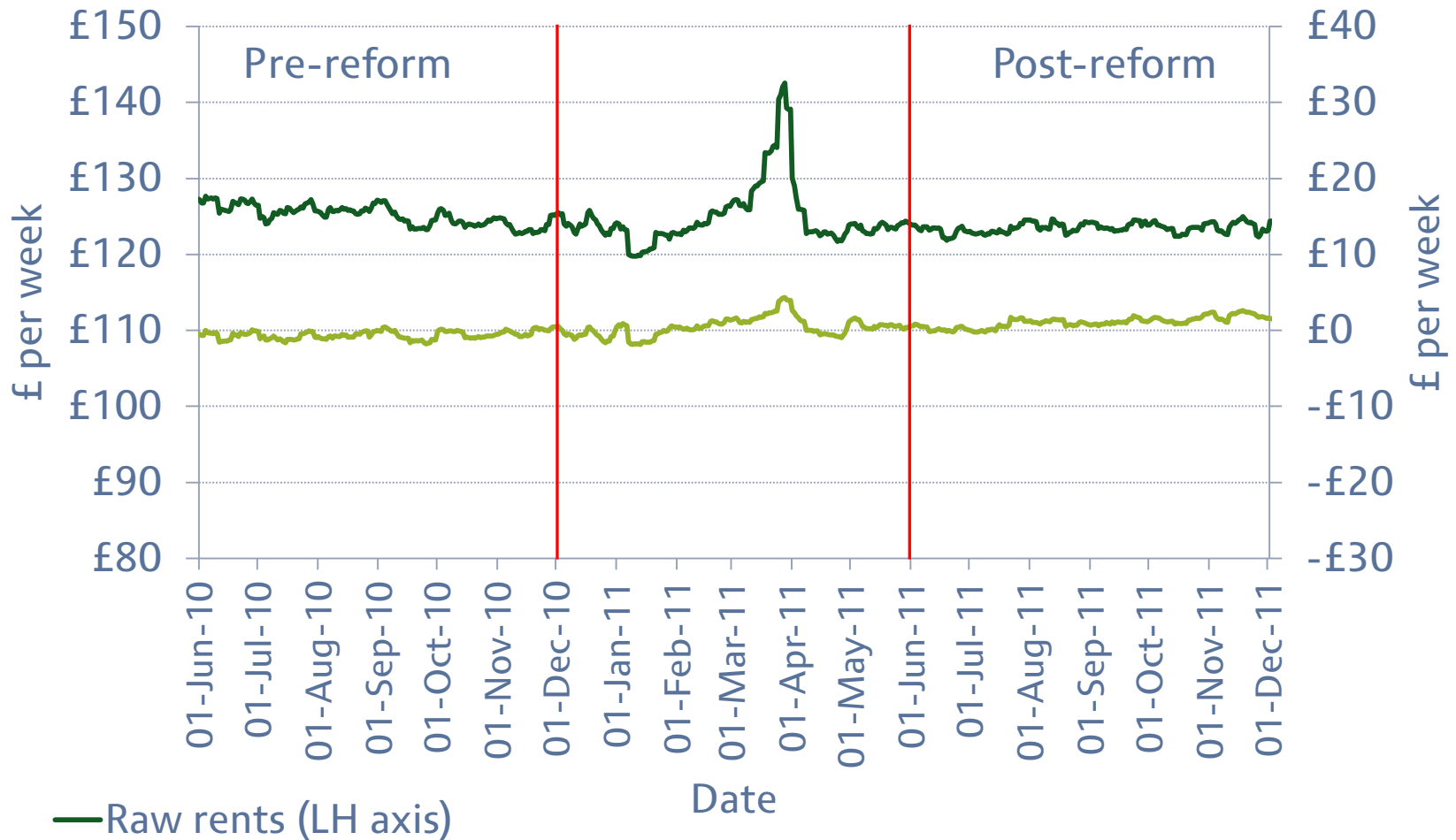
- Can explain most of the spike with controls for property type, but not all of it
  - So exclude window of data around time of reform (December 2010 to May 2011)



# Average LHA entitlement of new claimants (7-day moving average)



# Average rent of new claimants (7-day moving average)



# New claimants: methodology

- Can explain most of the spike with controls for property type, but not all of it
  - So exclude window of data around time of reform (December 2010 to May 2011)
- Identification of effect comes from extrapolation of time trend from before that window (pre-December 2010 data)
  - provides counterfactual for post-reform trend
- Trade-off: exclude more data and be surer of getting rid of anticipation effects; but time trends have to extrapolate more, and sample size is lost
  - We take very conservative approach because time trends look uncomplicated and sample very large

# Estimating incidence: controlling for property type

- The reform could have reduced the rents of HB claimants for 2 reasons
  1. Rents fall *for a given type of property* as a result of lower demand
  2. Claimants respond to cut by moving to a lower quality property
- We primarily want to know size of the *first* of these effects – the incidence of the reform on landlords through lower rents
  - We also look separately at property type changes
- To do this, we control for property type (BRMA x # of bedrooms)
  - But since controls are limited likely bias (if any) is still to overstate incidence on landlords, and understate the incidence on tenants

# New claimants: regression specification

$$y_{iat} = f_a(t) + 1(t \geq \text{April 2011})\beta + x'_{iat}\alpha + \varepsilon_{iat}$$

- Regress rent (or housing benefit entitlement) on a time trend, post-reform dummy and a vector of control variables
  - Linear time trend allowed to vary by BRMA (and overall trend allowed to be different before and after the reform)
  - Controls include dummies for full set of BRMA x rooms interactions, family type and age
- Implemented using Ordinary Least Squares, with standard errors clustered at the BRMA level

# Estimating incidence: results for new claimants

(£ per week)

Rent	Housing benefit	Rent net of HB
-0.46 (0.64)	-8.21*** (0.50)	7.76*** (0.49)

*Note:* \*\*\* Statistically significant at 1% level, \*\* Statistically significant at 5% level, \* Statistically significant at 10% level. Standard errors in brackets are robust to heteroscedasticity and clustering at the BRMA level. Includes controls for BRMA, local authority, number of bedrooms in the property, linear time trends in each BRMA, and family type and age. N = 659,682

- Estimated 95% of the cut in HB incident on tenants
- Fall in rents not statistically significant

# Existing claimants: overview

- We use as our sample the stock of LHA claimants in January 2011

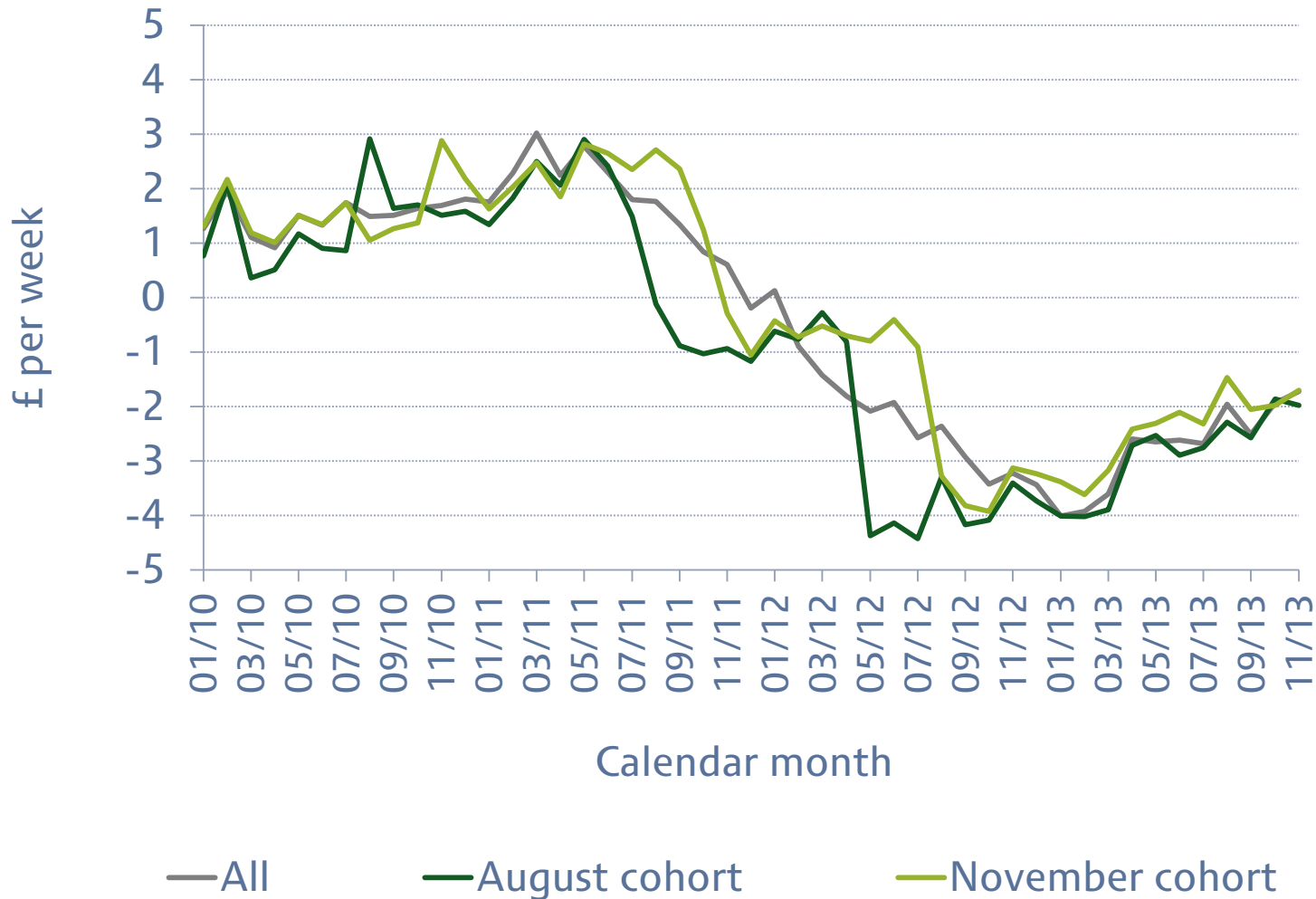
# Existing claimants: overview

- We use as our sample the stock of LHA claimants in January 2011
  - Follow them from January 2010 until November 2013
- Similar claimants affected at different times according to their annual claim anniversary
  - Lose any excess on their first post-April 2011 anniversary
  - Affected by other reforms nine months later (January 2012 to December 2012)



# Average LHA entitlement of existing claimants

(Residual from regression on BRMA and number of bedrooms)

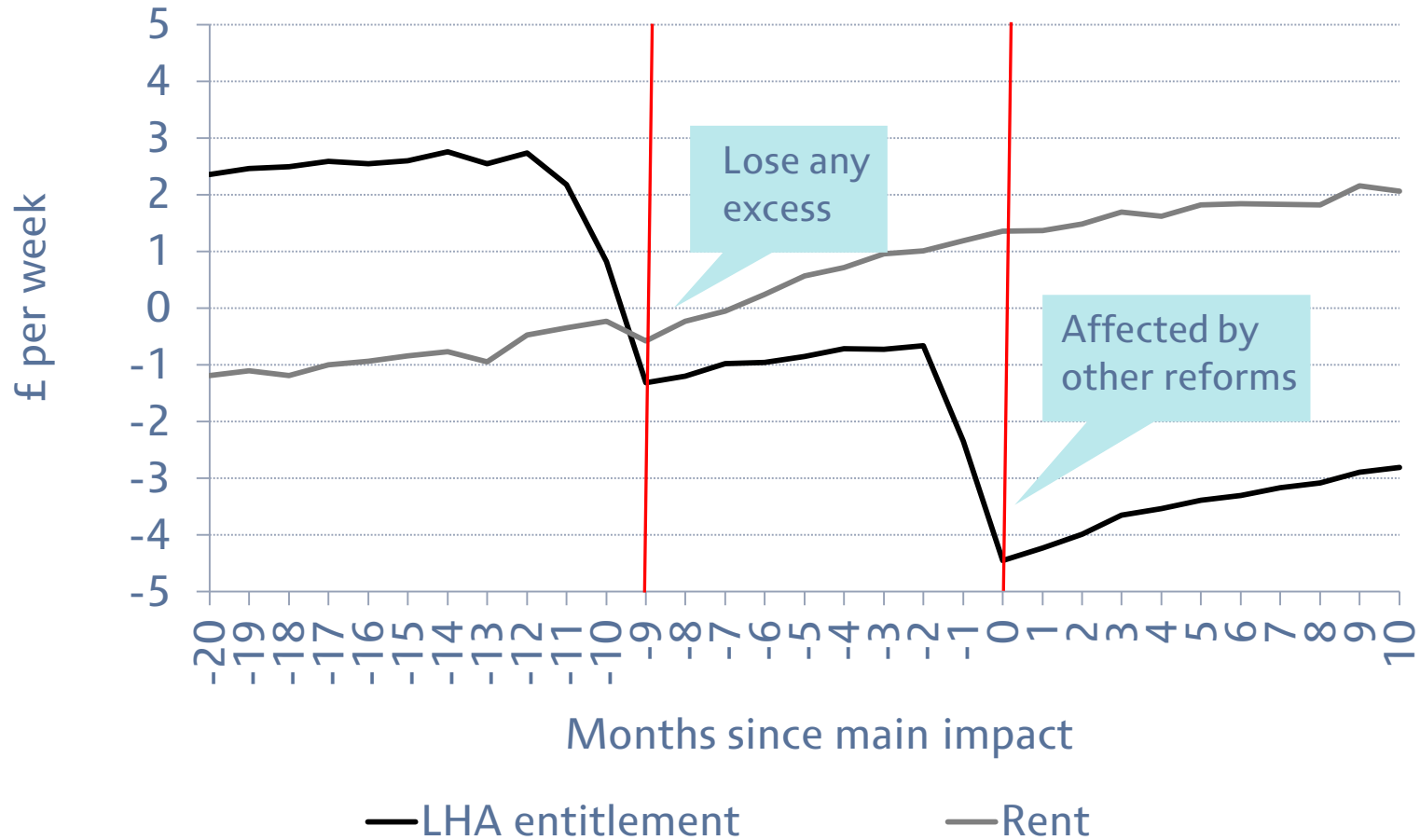


# Existing claimants: descriptives

- Gradual decline in LHA entitlements between April 2011 and December 2012
  - But each (claim anniversary) cohort affected at a different time

# Average LHA entitlements and rents of existing claimants by months since impact

(Residual from regression on BRMA and number of bedrooms)



# Existing claimants: descriptives

- Gradual decline in LHA entitlements between April 2011 and December 2012
  - But each (claim anniversary) cohort affected at a different time
- No visible effect of reform on trend in rents
  - Again indicative of our formal regression results

# Existing claimants: methodology

- Identification of effect of reforms comes from the fact that otherwise-identical individuals (with different claim anniversaries) face old and new systems *at the same point in time*
  - We apply a difference-in-difference design
- Key assumption: timing of any changes in *rents* depends on when a claimant moves onto new system
  - All part of same rental market, so not true if housing market is perfectly competitive and frictionless, with single ‘spot price’
  - But typically tenants’ rents only change once a year, and there is evidence of limited awareness of reforms before impact

# Existing claimants: regression specification

$$y_{iact} = f_a(t) + \pi_c + z'_{ct}\beta + x'_{iact}\alpha + \varepsilon_{iact}$$

- Regress rent and housing benefit entitlement on:
  - BRMA-level linear time trends and national month dummies
  - Cohort fixed effects
  - Series of binary variables capturing “months since main impact”
  - Control variables (similar to analysis of new claimants)
- Again implement using OLS, with standard errors clustered at the BRMA level

# Estimating incidence: results for existing claimants (£ per week)

	Housing benefit	Rent	Rent net of HB
Loss of excess	-4.98*** (0.42)	-0.81*** (0.27)	4.17*** (0.34)
Point of main impact	-8.31*** (0.42)	-0.73 (0.68)	7.58*** (0.85)
11 months after main impact	-6.84*** (0.92)	-0.79 (1.09)	6.06*** (0.83)

*Note:* \*\*\* Statistically significant at 1% level, \*\* Statistically significant at 5% level, \* Statistically significant at 10% level. Standard errors in brackets are robust to heteroscedasticity and clustering at the BRMA level. Figures given in UK pounds per week. Includes controls for BRMA, local authority, number of bedrooms in the property, local area deprivation, 'cohort', calendar month, linear time trends in each BRMA, and family type and age. N = 6,607,687

- Estimated 90% of the cut in HB incident on tenants
  - Similar to results for new claimants

# Subgroup analysis

- 3 subgroups of claimants affected by particular elements of the reform package:
  1. Those entitled to 5 bedrooms under old system (large families)
  2. Those affected by national LHA caps (all in central London)
  3. Those affected by the SAR change (25-34 singles without children not currently in shared accommodation)
- We define these groups based on January 2011 characteristics
  - Groups are exogenous (not determined by responses to the reform)
- For each group, consider changes in HB entitlement, “quality-adjusted” rent (our usual measure) and unadjusted rent
  - Difference is informative about moves to cheaper accommodation



# Estimating incidence: results for subgroups

(£ per week, 11 months after main impact)

Group (% of claimants)		Housing benefit	Rent	Rent net of HB
Increased scope of SAR rate (6.9%)	Quality-adjusted	-13.05*** (1.36)	-4.80*** (1.31)	8.25*** (0.34)
	Unadjusted	-7.58*** (1.30)	-2.49* (1.43)	5.09*** (1.77)
Abolition of 5-room rate (0.8%)	Quality-adjusted	-29.21*** (8.49)	-11.69** (5.48)	17.52*** (5.44)
	Unadjusted	-31.60*** (9.99)	-19.04** (9.27)	12.56*** (5.36)
National caps on LHA rates (2.4%)	Quality-adjusted	-41.93*** (0.42)	-5.68 (10.19)	36.25*** (12.31)
	Unadjusted	-48.48*** (0.92)	-17.07 (14.20)	31.41*** (12.13)

Note: \*\*\* Statistically significant at 1% level, \*\* Statistically significant at 5% level, \* Statistically significant at 10% level. Standard errors in brackets are robust to heteroscedasticity and clustering at the BRMA level. Figures given in UK pounds per week. "Adjusted" figures include controls for BRMA, local authority, number of bedrooms in the property, local area deprivation, 'cohort', calendar month, linear time trends in each BRMA, and family type and age."Unadjusted" figures do not include controls for contemporaneous BRMA, LA, number of bedrooms and local area deprivation, but do controls for BRMA in January 2011.

# Estimating incidence: evidence of heterogeneity

- About a third of the cut for those affected by extension of SAR rate (25-34 singles) incident on their landlords
- Estimated 40% of cut for those affected by abolition of 5-room rate incident on their landlords
  - Bigger fall in unadjusted rents suggests moves to cheaper properties
- Falls in quality-adjusted rents (and incidence on landlords) large and statistically significant in both cases
- But central estimate is only small fall in quality-adjusted rents for those affected by national caps on LHA rates (central London)
  - Although again some evidence of moves to cheaper properties

# Why the variation in incidence?

- Possible explanation is some groups just adjust faster (more to lose)
  - But this seems at tension with a number of facts: previous literature, our findings for new claimants, high incidence on national cap claimants
- Another possibility is different elasticities of demand
  - All else equal more elastic demand means higher incidence on landlords
- Reasons to think demand of SAR and 5-room groups is more elastic?
  - Single 25-34s might be relatively indifferent between self-contained and shared accommodation
  - Large families might be relatively indifferent over number of bedrooms (at the 4/5 margin)

# Did claimants move in response?

- As well as the incidence of reforms, might want to know impact on the housing choices of claimants
  - Did they respond by moving to cheaper types of properties?

## Impact on property choices: results for subgroups

	Outcome ( <i>pre-reform level</i> )	Effect of reform
Increased scope of SAR rate	Probability of moving (ppts per month) (2.6)	1.4***
	Probability of living in shared accommodation (ppts per month) (N/A)	12.9***
Abolition of 5-room rate	Probability of moving (ppts per month) (2.1)	0.8
	Number of bedrooms (3.8)	-0.135
National caps on LHA rates	Probability of moving (ppts per month) (1.6)	1.1*
	Probability of moving out of capped area (ppts per month) (0.1)	0.4

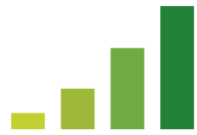
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# Did claimants move in response?

- As well as the incidence of reforms, might want to know impact on the housing choices of claimants
  - Did they respond by moving to cheaper properties?
- Those affected by the SAR change more likely to move, and much more likely to live in shared accommodation
  - Some evidence those affected by 5-room rate moved to smaller properties (reduced number of bedrooms)
  - Some evidence those affected by national caps moved out of capped area (central London)

# Conclusions

- We looked at whether cuts to private sector HB in 2011 and 2012 led to a fall in rent levels
  - Was the cut incident on tenants or their landlords?
- Evidence from both new and existing claimants that nearly all of the incidence (around 90%) on tenants, at least initially
  - Little change in rent levels
- Incidence on landlords significantly higher for some subgroups
  - Those affected by extension of SAR rate and abolition of 5-room rate
- Results suggest incidence can vary substantially
  - Less straightforward than one might think given existing literature



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