Evaluation Paper 25/2: An evaluation of our General Insurance Pricing Practices (GIPP) remedies

Technical Annex

July 2025

Contents

1 Introduction

1. This Technical Annex is a supplement to our evaluation. It presents the methodology and results of our econometric analysis of remedy in PS21/5: General insurance pricing practices market study.

2. This annex is structured as follows: we first give an overview of our intervention, followed by a description of the data source used. We then present a detailed analysis of the causal impact of the pricing remedy.

Policy background

3. In September 2020 we published our final market study report on General Insurance Pricing Practices (GIPP) in MS18/1.3. Our study found that some firms gradually increased the price for customers who renew with them year on year. This is a form of price discrimination known as price walking. Our market study found that most firms used complex and opaque pricing techniques to identify the consumers least likely to switch at renewal based on their characteristics and factored this into their price-setting. These consumers then faced year on year price rises above the competitive market level, with some loyal consumers paying very high prices.

4. Price walking distorts competition and increases costs for consumers and firms, leading to higher prices for consumers who do not switch or negotiate. For example, for a typical level of risk, the market study found that new customers paid an average of £285 for motor insurance while customers who have been with their provider for more than five years paid £370. Overall, we found that 6 million policy holders paid high prices in 2018 – if they paid the average for their risk they would have saved £1.2bn.

5. In May and August 2021, we proposed a package of remedies in PS21/5 and PS 21/11 to address the harms identified in the market study, summarised in Table 1.

Table 1: Summary of GIPP remedies

Remedy	Date implemented	Description and affected markets
Pricing	1 January 2022	When a firm offers a renewal price to a customer, this must be no greater than the equivalent new business price (ENBP) for a new customer. The remedy ties the renewal price to the ENBP. This would stop firms basing their pricing decisions for customers on their tenure. **Affected markets:** home and motor and any related additional products sold to the retail customer.
Auto-renewal	1 January 2022	For any general insurance contract entered into with a retail customer, the firm must inform them at sale and renewal whether a policy will auto-

		renew. The consumer must be able to cancel autorenewal by at least the same channels that they could purchase the policy from – and these must be communicated to the consumer at sale and renewal. Finally, there must be no unnecessary barriers imposed on consumers wanting to stop auto-renewal. **Affected markets**: all general insurance contracts, excluding private health and pet insurance.
Product governance	1 October 2021	The scope of PROD 4 was extended to all general insurance and pure protection products regardless of when they were manufactured or significantly adapted, where previously they only affected policies manufactured or significantly adapted after 1 October 2018. Enhancements to existing product governance rules to ensure products offer fair value to customers. **Affected markets**: all non-investment insurance contracts but excluding contracts of large risk meeting certain conditions and reinsurance.
Reporting requirements	1 January 2022	Reporting requirements to help ongoing supervision of insurance markets and a pricing attestation; firms must attest whether they are complying to pricing rules on an ongoing basis. **Affected markets**: home and motor insurance

2 Data and measurement

6. This section provides an overview of the data sources used for the analysis and other measure issues.

7. We evaluate the GIPP remedies using a dataset collected specifically for this evaluation, collecting pricing data from a sample of firms. We selected the set of firms to align with the sample that supplied data for the market study MS18/1.3 (excluding one group that has exited the general insurance market and sold its business to one of the other groups in the market study sample).

Sampling Method

8. We evaluated the GIPP remedies using a dataset collected for this evaluation from 16 home insurance firms and 13 motor insurance firms, selected to mimic those covered in the original market study analysis. In 2022 (the year of intervention) the market shares of the insurers in our sample, based on Gross Written Premium, was calculated at approximately 80% and 57% for home and motor respectively.

9. Each firm in our dataset represented a price-setting underwriter or intermediary firm and were a combination of large and small firm to ensure representativeness across policy pricing models. Ensuring representativeness across our sample is important as larger firms may enjoy economies of scale that can lead to lower costs and potentially lower premiums for policy holders. Smaller firms may not benefit from these economies and could have higher operational costs, which might lead to higher premiums.

10. In Q2 2024, we collected insurance policies directly from in-sample firms through an c.10% quasi-random sample of each firms' consumers from the beginning of Q1 2019 to the end of Q1 2024. This enabled us to observe up to three renewal terms for some consumers post-rule implementation between the period Q1 2022 to Q1 2024. This allowed assessing longer-term impacts of the remedy, avoiding potential distortions from one-off dynamics during initial GIPP implementation in early 2022. Additionally, the scope of data received prior to GIPP implementation provided us with data that we could use to test any anticipation effects or behavioural changes by firms before the rules came into effect.

11. To ensure consistency, we selected the same set of firms which supplied data for the market study (excluding one firm that has since left the general insurance market and sold its business to one of the other groups in the market study sample). Overall, the market study collected data from 24 legal entities.

12. To reduce firm burden, we excluded the following policies in our data request:

    - policies incepted or renewed outside the period 1 January 2019 to 31 March 2024 inclusive.
    - commercial policies.
    - buy to let/landlord insurance.
    - bundled vehicle and home policies (policies which have both vehicles and homes).

- policies where the underwriter or intermediary have no influence over pricing. Policies where prices are influenced through agreed targets, such as profit targets and loss ratio targets are within scope and information on these policies was included in the data request.
- policies which have non-conventional risk underwriting processes (e.g., bordereau).
- high net-worth policies with bespoke underwriting processes (e.g., there is a manual element to the process). Policies that follow a conventional underwriting process were included, even if customers were segregated based on net worth.
- policies that are planned at inception to last fewer than 6 months.
- policies within books of business which consist of fewer than 1,000 policies in either 2021 or 2022 (i.e. policies were not in scope if the average number of policies in their book in 2021 was less than 1,000, or the average number of policies in their book in 2022 was less than 1,000).

13. We requested data for a smaller time frame for expected cost of claims (ECC). Firms provided ECC data for policies incepted or renewed over the period Q1 2021 to Q1 2024 inclusive. This reduced firm burden while providing sufficient data to conduct a robust evaluation.

Key variables

14. Table 2 presents key variables used in the analysis and their definition. Our dataset includes information at the policy-level.

Table 2: Key variables

Category	Variable	Description	Home/ Motor
Identifier	Date of birth	Date of birth of the main policy holder (first named policy holder for policies held in joint names).	Both
	Second joint policy holder date of birth	For policies in joint names, the date of birth of the second joint policy holder.	Both
	Policy holder postcode	Full postcode for the main policy holder (first named policy holder for policies held in joint names). This should be their main residence, or if not known, their correspondence address.	Both
	Consumer ID	Unique consumer reference that can be used to identify a consumer should they change within the firm to a different policy	Both
	Policy ID	Unique policy reference that can be used to identify the policy. Policy ID should correspond to Policy Tenure. E.g. for a policy with a Policy Tenure of 3 years, we should observe 4 rows of data with the same Policy ID (one with Policy Tenure = 0, one with Policy Tenure = 1, etc.), assuming the entire policy tenure is captured in our sampling time frame (Q1 2019 to Q1 2024).	Both
Book information	Name of book	Book of business this policy belongs in. Firms should use their firm-specific definition of book.	Both
Product information	Underwriter name	Name of the firm underwriting the core policy.	Both
	Intermediary name	If applicable, name of the intermediary through which the policy is sold, who is responsible for the customer.	Both
	Brand name	Name of the brand under which the policy was sold to the consumer. This should be the brand the consumer sees when purchasing the policy.	Both
	Product name	Product name as sold to the consumer. This varies, for example if you offer a bronze, silver or gold product.	Both
	Type of motor	Is the policy for cars, Motorcycles including tricycles, or other? This definition is the same as the REP021 definition of product type.	Motor

	insurance policy		
	Cover level	Is the policy's cover Comprehensive or Third-party, fire and theft, or Third-party only? For multi-vehicle policies, please report the cover relating to the vehicle which this row of data relates to.	Motor
	Type of home insurance policy	Is the policy for buildings only, contents only, or buildings and contents? This definition is the same as the REP021 definition of product type.	Home
	Distribution channel	Was the policy sold (i) directly to the consumer (ii) through an affinity partnership (net-rated) (iii) through an affinity partnership (gross-rated) (iv) through an intermediary (net-rated) (v) through an intermediary (gross-rated) or (vi) through a Price Comparison Website? This definition is the same as the REP021 definition of channel.	Both
General policy information	Policy Tenure	The number of years a customer has held the policy, including any renewal. For example: 0 = new business customer, 1 = customers who held their policy for 1 year, 2 = customers who held their policy for 2 year. This definition of is consistent with the ICOBS 6B.2 definition of tenure (https://www.handbook.fca.org.uk/handbook/ICOBS/6B/2.html; https://www.handbook.fca.org.uk/handbook/glossary/G3602t.html). Policy tenure should be consistent with how a new business customer is defined when there are changes to contractual parties (as per ICOBS 6B.2.20).	Both
	Policy original inception date	Date when the policy was originally incepted. If the policy's original inception date is the same as the policy term start date, please put the same date.	Both

	Policy term start date	This is the date when the policy's term started. For renewal business, this is not the original inception date of the policy, but the date when the term started.	Both
	Policy term expiry date	End date of the policy term or date at which the policy term was cancelled (if cancelled prior to the intended term end date).	Both
	Vehicle ID	The Code List 44 8-digit ABI vehicle identification code for the insured vehicle as at policy inception, sourced by Thatcham Research (https://www.thatcham.org/pf/vehicle-risk-data/).	Motor
	Number of properties insured	Number of properties on the policy.	Home
Price and cost of core policy	Price of the core policy	Gross written premium to be paid by the consumer for the core policy at the point of sale of the policy (at inception/ renewal). This price should exclude the price of any insurance "add-ons", IPT, finance APR, and any fees such as renewal fees etc. It should include any discounts applied to the core policy. It should exclude any price elements applied after the point of sale. "Add-on" follows the definition for "Optional additional product" in ICOBS 6B.2 (https://www.handbook.fca.org.uk/handbook/glossary/G3562o.html). Regarding extensions of cover, if the extension of coverage is an amendment to the core policy, include it in the core price. If the extension of coverage is offered as an optional extra separate from the core policy, consider it an add-on (and include it in the relevant add-on fields).	Both
	Expected claims cost or net-rated written premium of the core policy	Expected claims cost of the core policy (excluding any insurance "add-ons") OR Net-rated written premium (net rated business only).	Both
Total prices	Total price paid by the consumer for core policy and all add-	Total amount paid by consumer, including relevant add-ons, premium finance, fees & discounts at the point of sale of the policy (at inception/renewal). This value should exclude IPT.	Both

	ons, including finance, fees & discounts.		
Claims	Claim pay-outs - core policy	The total monetary value (£) to date of claim pay-outs relating to accidents incurred during the period covered by the core policy (i.e. the period defined in A16-A17). Please report all relevant claim pay-outs relating to the accidents in this period, even if the claim pay-out dates are outside this period. It only includes costs/payments to date; do not provide any estimates of future costs/payments relating to a specific accident. This should include any claim pay-outs paid directly to the customer and any cash-equivalent benefits (e.g. payments to third parties such as paying a home engineer for a home emergency claim, legal fees paid to a law firm, paying a contractor to conduct repairs to a property). This variable EXCLUDES specific claims handling costs, any general expenses associated with the general handling of claims (e.g. general claims call centre operational costs), other non-claims costs, and the costs of providing a regular service element such as a helpline or a boiler service for home emergency.	Both
	Specific claims handling costs - core policy	The total monetary value (£) to date of any specific expenses incurred by the provider firm in handling individual claims on the core policy, including claims investigation costs and loss adjustor costs. It only includes costs/ payments to date; do not provide any estimates of future costs/payments relating to a specific accident. This variable EXCLUDES any general expenses associated with the general handling of claims (e.g. general claims call centre operational costs), other non-claims costs, and the costs of providing a regular service element such as a helpline or a boiler service for home emergency.	Both
	Claims pay-outs - add-ons	The total monetary value (£) to date of claim pay-outs relating to accidents incurred during the period covered by the policy's add-ons. Please report all relevant claim pay-outs relating to the accidents in this period, even if the claim pay-out dates are outside this period. It only includes costs/ payments to date; do not provide any estimates of future costs/ payments relating to a specific accident. This should include any claim pay-outs paid directly to the customer and any cash-equivalent benefits (e.g. payments to third parties such as paying a home engineer for a home emergency claim, legal fees paid to a law firm, paying a contractor to conduct repairs to a	Both

		property). This variable excludes specific claims handling costs, any general expenses associated with the general handling of claims (e.g. general claims call centre operational costs), other non-claims costs, and the costs of providing a regular service element such as a helpline or a boiler service for home emergency.	
	Specific claims handling costs - add-ons	The total monetary value (£) to date of any specific expenses incurred by the provider firm in handling individual claims relating to the policy's add-ons, including claims investigation costs and loss adjustor costs. Please report all relevant costs relating to accidents in the period, even if the costs occur outside this period. It only includes costs/ payments to date; do not provide any estimates of future costs/ payments relating to a specific accident. This variable excludes any general expenses associated with the general handling of claims (e.g. general claims call centre operational costs), other non-claims costs, and the costs of providing a regular service element such as a helpline or a boiler service for home emergency.	Both
Fees and incentives	Value of ENBP cash or cash-equivalent incentives	The monetary value of any cash or cash-equivalent incentives applied to this policy, that are given to new business customers and that the renewing customer would be eligible for if they were a new business customer. The definition of ENBP cash or cash-equivalent incentive is consistent with ICOBS 6B.2.9 (you should include discounts used in the Equivalent New Business Price calculation) and ICOBS 6B.2.12 Please refer to column 1 in ICOBS 6B.2.14 for a non-exhaustive list of examples of cash and cash-equivalent incentives. If the discount is a premium percentage (%) discount, report the monetary value of the discount based on applying this discount to the relevant premium. This field should be populated for all submission years, including those prior to the GIPP rules coming into force. For pre-GIPP years, include any cash or cash equivalent incentives applied to the policy which were given to new business customers, and renewing customers would be eligible for if they were new business customers.	Both

	Value of non-ENBP cash or cash-equivalent incentives	The monetary value of any cash or cash-equivalent incentives applied to this policy, that are NOT given to new business customers and are therefore not used in the Equivalent New Business Price calculation. Examples include incentives which are for renewing customers only. The definition of cash or cash-equivalent incentive is consistent with ICOBS 6B.2.12. Please refer to column 1 in ICOBS 6B.2.14 for a non-exhaustive list of examples of cash and cash-equivalent incentives. If the firm record a premium percentage (%) discount, please report the monetary value of the discount based on applying this discount to the relevant premium. This field should be populated for all submission years, including those prior to the GIPP rules coming into force. For pre-GIPP years, include any cash or cash equivalent incentives applied to the policy which were NOT given to new business customers (e.g. incentives for renewing customers only).	Both
	Non-cash incentives	Any non-cash incentive discount applied on this policy? The definition of non-cash incentive is consistent with ICOBS 6B.2.13. This refers to column 2 in ICOBS 6B.2.14 for a non-exhaustive list of examples of non-cash incentives. This field should be populated for all submission years, including those prior to the GIPP rules coming into force.	Both
Policy coverage	Contents - cover limit	The limit on claims for contents-related costs for the core policy. This limit can be either: a firm-defined limit (i.e. the standard limit determined by the chosen brand and product) or a consumer-defined limit (i.e. they can change the limit freely). We understand that the cover limit may be either a firm-defined or consumer-defined limit. This should be the standard (i.e. not-peril/ claim type specific) limit. However, if there is no standard limit (i.e. all limits are peril/claim-specific), it indicates the highest limit.	Home
	Contents - single item limit	The limit for a claim on a single item for the policy. This limit can be either: a firm-defined limit (i.e. the standard limit determined by the chosen brand and product) or a consumer-defined limit (i.e. they can change the limit freely for a specified item to adjust their premium). We understand that the cover limit may be either a firm-defined or consumer-defined limit. This should be the standard (i.e. not-peril/claim type specific) limit. However, if there is no standard limit (i.e. all limits are peril/claim-specific), it indicates the highest limit.	Home
	Buildings - cover limit	The limit on claims for buildings related costs for the core policy. This should be the standard (i.e. not-peril/claim type specific) limit. However, if there is no standard limit (i.e. all limits are peril/claim-specific), it indicates the highest limit.	Home

	Add-on - Valuables	Whether the policy covers loss, damage or theft of listed valuables with value in excess of the single item limit through an add-on or is it included as part of the core policy.	Home
	Add-on - Legal services	Whether the policy covers legal services costs through an add-on or is it included as part of the core policy.	Home
	Add-on - Home emergency	Whether the policy covers home emergency costs through an add-on or is it included as part of the core policy.	Home
	Add-on - Protected no claims	Whether the policy protect no claims discount through an add-on or is it included as part of the core policy	Home
	Add-on - Portable personal belongings	Whether the policy covers personal belongings outside of the home through an add-on or is it included as part of the core policy.	Home
	Add-on - Boiler cover	Whether the policy covers boiler repair costs through an add-on or is it included as part of the core policy.	Home
	Add-on - Pedal cycles	Whether the policy covers loss, damage or theft of a pedal cycle away from home through an add-on or is it included as part of the core policy.	Home
	Policy Excess - Voluntary - Contents	The value of the voluntary excess for the contents element of the policy.	Home
	Policy Excess - Voluntary - Building	The value of the voluntary excess for the buildings element of the policy.	Home
	Policy Excess - Compulsory - Contents	The value of the compulsory excess for the contents element of the policy.	Home

	Policy Excess - Compulsory - Building	The value of the compulsory excess for the building element of the policy.	Home
	Policy Excess - Flood	The value of the excess for flood claims.	Home
	Policy Excess - Escape of water	The value of the excess for escape of water claims.	Home
	Add-on - Breakdown cover	Whether the policy covers breakdown costs through an add-on or is it included as part of the core policy.	Motor
	Add-on - Legal services	Whether the policy covers legal services costs through an add-on or is it included as part of the core policy.	Motor
	Add-on - personal accident cover	Whether the policy covers personal accident costs through an add-on or is it included as part of the core policy.	Motor
	Add-on - Protected no claims	Whether the policy protects no claims discount through an add-on or is it included as part of the core policy.	Motor
	Add-on - Car key cover	Whether the policy covers costs for key replacement through an add-on or is it included as part of the core policy.	Motor
	Add-on - Hire car	Whether the policy covers hire car costs if the car is lost or written off through an add-on or is it included as part of the core policy.	Motor
	Add-on - Windscreen cover	Whether the policy covers windscreen cover if the car is lost or written off through an add-on or is it included as part of the core policy.	Motor

	Policy Excess - Voluntary	The value of the voluntary excess for this policy. This field is populated by the standard excess for claims i.e. do not report any peril- specific excesses e.g. windscreen replacement, fire & theft. For policies with multiple vehicles, it indicates the excess for the vehicle this row relates to.	Motor
	Policy Excess - Compulsory	The value of the compulsory excess for this policy. This field is populated by the standard excess for claims i.e. do not report any peril- specific excesses e.g. windscreen replacement, fire & theft. For policies with multiple vehicles, it indicates the excess for the vehicle this row relates to. If compulsory excess depends on age, type of licence and/or duration licence held, please input the excess which applies to the main policyholder's status.	Motor
	Policy Excess - Compulsory - Windscreen replacement	The value of the compulsory excess for windscreen replacement. For policies with multiple vehicles, please provide the excess for the vehicle this row relates to	Motor
Renewal	Autorenewal	Whether this policy by default an auto-renewing policy at the start of the policy term. By "default", we mean that in the policy inception/renewal customer journey, unless the consumer opted-out of auto-renewal, the policy was auto-renewing.	Both
	Auto-renewal cancellation	Whether the consumer cancelled the auto-renewing element of this policy. This should include consumers who have opted out of auto-renewal when purchasing the policy and consumers who have cancelled auto-renewal during the policy.	Both
	Cancellation prior to completion	Whether the policy cancelled during the current contract prior to its completion. 'Cancellation prior to completion' means the policy ends prior to the policy term's intended end date. Therefore, policies where the term is completed should be classed as No; this includes policies which lapse and/or are not renewed when the term ends.	Both
Breaches and redress	Breach	Whether there has been an identified breach of the GIPP pricing rules (ICOBS 6B.2).	Both
	Redress paid	Whether compensation has been paid to the policy holder for this breach.	Both
	Value of redress paid	The monetary value of any compensation paid to the policy holder as a result of the breach, excluding any interest paid. For breaches where remediation will be paid but has not been paid yet (at the time of submitting the data request), it indicates the best estimate of the remediation to be paid.	Both

	Total difference in price	The difference in the price originally paid for the policy, and what the price would have been in the absence of the remedy (i.e. original price with breach minus price without breach).	Both

Data cleaning and sample construction

15. We carried out the following tasks on data cleaning:

    - An initial data review and quality assessment of each firm's submission and importing data into statistical software.
    - An in-depth review and data cleaning of all responses. This included but was not limited to:
        - Establishing common variable formation.
        - Distinguishing between zeroes and missing values and making corrections where appropriate.
        - Examining the distribution of variables to detect possible errors
        - Removing duplicated observations.
        - Ensure variables are within reasonable expectation (e.g. positive price values)
    - We returned to the firms with clarification questions and requested a resubmission until the data quality is sufficient for a robust analysis.

16. Once a clean dataset for each firm was obtained, we matched observations from across the distribution chain to ensure we did not have duplicate entries. This issue arose because we collected data from both underwriters and intermediaries, meaning that policies were reported twice when both entities were in-sample.

Cross-firm policy matching

17. To determine if the same policy is listed in two different providers, for example an intermediary and an underwriter, we first ran a check for duplicated entries across a collection of 8 different parameters list below:
    • Birth date, policyholder postcode, underwriter FRN reference (0), policy start date
    • Birth date, policyholder postcode, underwriter FRN reference (0), policy expiry date
    • Birth date, policyholder postcode, underwriter FRN reference (1), policy start date
    • Birth date, policyholder postcode, underwriter FRN reference (1), policy expiry date
    • Birth date, policyholder postcode, underwriter FRN reference (2), policy start date
    • Birth date, policyholder postcode, underwriter FRN reference (2), policy expiry date
    • Birth date, policyholder postcode, underwriter FRN reference (3), policy start date
    • Birth date policyholder postcode, underwriter FRN reference (3), policy expiry date

    Where underwriter FRN reference (#) refer to the underwriter ids associated with any given policy (in cases where multiple underwriters are listed for a single policy).

18. We then grouped all policies which had a cross-firm policy reference_X (where X: {1..8}) that intersects with another cross-firm policy reference_X into a single integer feature.

19. As an example, we present the following scenario in Table 3 below:

Table 3: Cross-firm policy examples

Cross-firm policy reference (0)	Cross-firm policy reference (1)	Cross-firm policy reference (2)	Cross-firm policy reference
1-1	2-1	None	1
None	2-1	3-1	1
None	None	3-1	1
1-2	2-2	3-2	2

20. In this example, because cross-firm policy reference (1) is determined to be duplicated in the first 2 rows then they are given the same ID. The same is true of rows 2 and 3 for cross-firm policy reference (2). Since cross-firm policy reference (1) denotes that rows 1 and 2 are the same and cross-firm policy reference (2) denotes that rows 2 and 3 are then same, then in the final cross-firm policy reference column, rows 1,2, and 3 are given the same integer ID.

21. When all cross-firm policy reference_X were processed, any observations without entries in any cross-firm policy reference_X column were then given a unique monotonically increasing integer carrying on from the largest already present in the cross-firm policy reference column so that all entries had a cross-firm policy reference value.

22. Given that we did not have a specific customer ID variable in our dataset, a customer ID was created from the individual characteristics below.

23. For home and motor policies, to identify an individual customer some conditions must be met, including the birth date and policyholder postcode matching, as well as the expiry date and new policy start date matching.

24. The customers which overlap in their identified characteristics were then amalgamated in the same way as for the cross-firm policy ID above.

Establishing Policy Groupings

25. Our goal was to estimate the extent to which a policy is "price-walked". However, we are unable to do this at the policy level as we don't observe the counterfactual scenario - what the Equivalent New Business Price (ENBP) would be at the policy level.

26. Our aggregation approach was intended to mimic how firms systematically price policies. Therefore, we constructed a series of policy groupings — sets of policies with similar characteristics that are, ideally, subject to the same pricing strategy. This provided us with a unit of analysis, where each grouping can have a level of tenure-based price discrimination applied to it.

27. Policy groupings are defined by the following characteristics:

- Underwriter
- Intermediary
- Distribution channel

- Insurance type (home market only)
- Cover level (motor market only).

28. This definition aligns with how firms submit REP021 data, ensuring consistency with industry reporting practices and reflecting how pricing strategies are typically structured. In total, we constructed approximately 15,000 unique policy groupings across home and motor. Examples of policy grouping combinations are provided below in Table 4:

Table 4: Examples of policy grouping definitions

Underwriter	Intermediary	Distributional channel	Insurance type	Cover level
Underwriter A	Intermediary C	Through an intermediary (gross-rated)	Contents	N/A
Underwriter B	Intermediary B	Through a Price Comparison Website	N/A	Comprehensive
Underwriter E	Intermediary H	Through an intermediary (gross-rated)	N/A	Comprehensive
Underwriter H	Intermediary B	Through an affinity partnership (gross-rated)	Buildings	N/A
Underwriter B	Intermediary G	Directly to the consumer	Buildings and contents	N/A

Source: FCA analysis of 2024 Insurance Data, underwriter and intermediary names are redacted to ensure anonymity

29. The exposure variable was estimated using a regression of tenure on core margin (see equation in Paragraph 96 below). This regression requires a control for risk across tenures, which is measured by the expected cost of claims, ECC. To reduce firm burden, we only requested estimates for ECC from 2021 onwards. Therefore, the first stage exposure estimation is the extent of price-walking for the policy groupings in the year 2021, as the pre-period ends at the end of 2021.

30. In the final difference-in-differences estimation, we used observations across the entire data period, from 2019 onwards. Therefore, we extrapolated the exposure determined in 2021 and assumed (for each policy grouping) that this was also the exposure in 2019 and 2020.

31. Our assumption is that the pricing (specifically, price-walking) strategy doesn't change across the pre-treatment period. Based on discussions with industry experts and internal stakeholders, we believe this is a reasonable assumption to make.

3 Analysis of the causal impact of the pricing remedy

32. In this chapter, we provide details and additional information on the analysis of the causal effect of GIPP on premiums, discussed in the main report.

33. To isolate the effect of GIPP on other factors, we used a continuous Difference-in-Differences (cDID) design analysis. This approach allows an estimation of the Average Causal Response (ACR) which is the causal impact of GIPP on those firms who were subject to the ban.

Methodology description

34. The aim of the causal analysis is to determine the effect that banning tenure-based price discrimination had on consumer premiums. However, we cannot conduct this analysis at the policy level because we do not observe the counterfactual scenario, what the Equivalent New Business Price (ENBP) would be for each policy. Therefore, we need to establish a common way to assess the impact of GIPP on different policies based on their exposure to tenure-based price discrimination.

35. Our approach exploited the fact that firms had different pricing strategies for different types of insurance policies. Defining our policy groupings as above, there were some policy groupings for which the firms did not price walk (i.e. they charged the same price regardless of the tenure of the customer) before the intervention, so were weakly affected by the pricing remedy. Meanwhile there were other policy groupings where firms practiced price-walking before the intervention, hence firms must have adjusted their pricing strategy when the GIPP rules were implemented.

36. The difference in exposure to the policy across groupings allows isolating the effect of the GIPP rules from other factors (such as inflation) that may have affected the premium of the policy. Our strategy is as follows:

Step one

37. To identify the extent to which a policy grouping is exposed to GIPP reforms, it must first be established the extent that policy grouping was priced based on tenure prior to GIPP reforms. Therefore, we performed a linear regression of margin (which accounts for customer risk) on tenure within each grouping, controlling for various policy and customer characteristics prior to the implementation of GIPP:

$$CoreMargin_i = \pi_g Tenure_i + \gamma_{1g} Year_i + \boldsymbol{\gamma_g} Covar_i + \epsilon_{ig}$$

Where each variable is defined as follows:

- $CoreMargin_i$: core margin of policy i, computed as:

$$(Core\ price\ at\ inception - \ expected\ cost\ of\ claims\ for\ the\ core\ policy)/core\ price\ at\ inception$$

- $\mathrm{Tenure_i}$: is tenure of policy i in years.
- $Year_i$: year of policy inception, with coefficient γ_{1g} defined at the group-level.
- $Covar_i$: a set of covariates at the policy level with group-level vector of coefficients $\boldsymbol{\gamma_g}$, including:
    - The year of birth of the customer
    - The postcode area of the customer

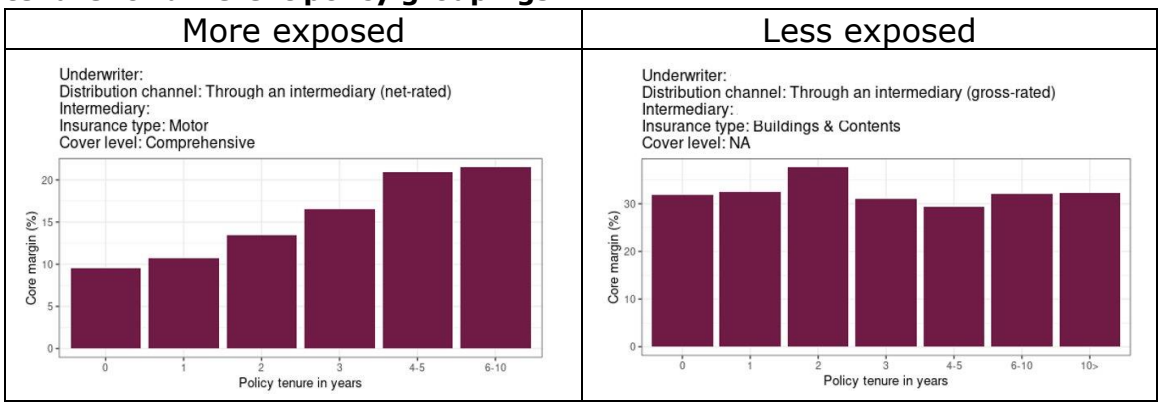
- The book that the policy belongs to (e.g. Firm A Home Insurance, Firm B Household)
- The product name of the policy (e.g. Firm A Mutual Car, Firm B Vehicle)

38. We restricted our sample to pre-GIPP period observations only to determine the extent of price walking. The coefficient (π_g) on policy tenure from this regression represents the average increase in margin as tenure increases by one year, for each grouping g. We refer to this as the "price-walking" coefficient, which quantifies the extent of price walking within each grouping before GIPP and indicates how "exposed" the policy grouping is to the introduction of GIPP. It should be noted that the coefficients are group-specific, as we conduct an individual regression for each policy grouping.

39. Our causal analysis exploits the different degrees of exposure to the policy to identify causal effects. In this case, exposure to GIPP is determined by the price-walking coefficient. Broadly speaking, groups with higher level of price-walking were more exposed and groups with lower levels of price-walking were less exposed.

40. Figure 1 below provides examples of policy groupings that are considered more and less exposed to GIPP based on the relationship between margin and tenure:

Figure 1: Two case studies showing the relationship between margin and tenure for different policy groupings



Source: FCA analysis of 2024 Insurance Data, underwriter and intermediary names are redacted to ensure anonymity

Step two

41. Our approach to estimation is referred to as a continuous difference-in-differences (cDID). We estimated the causal effect of GIPP by comparing changes in premiums between high- and low-exposure groups across the intervention period. We conduct the following two-way-fixed-effects (TWFE) regression:

$$\text{TotalPrice}_i = \alpha_g + \tau_t + \beta_1 \hat{\pi}_g \times \text{After}_i + \varepsilon_i$$

42. Where:
- TotalPrice_i: Total price at inception for policy *i*
- α_g: policy grouping fixed effects
- τ_t: year-month fixed effects
- After_i: whether the policy *i* incepted after 2022-01-01 (GIPP's implementation date)

- $\hat{\pi}_g$: group specific estimated price walking coefficient from stage 1. We replace any negative values with zero, as policies cannot be negatively affected by GIPP.
- Standard errors are clustered at the policy grouping level. We acknowledge that the reported standard errors do not account for the fact that the price-walking coefficient is estimated, which may lead to understatement of the true sampling variability. While bootstrap methods would provide a more robust inference framework in this context, the computational demands associated with resampling in such a large dataset rendered this approach impractical.

43. We also ran, for each market, two additional regressions delineating the front and back book. The set up was the same, but the data was restricted to only observations with tenure equal to 0 and tenure above 0 respectively. This gave 12 total regressions, 3 regressions for motor, and 3 for each home market (buildings, contents, buildings & contents).

Step three

44. The cDID estimates have an Average Causal Response (ACR) interpretation. We transformed the cDID coefficient as follow:

$$ACR_i = \beta_{1_i}(\hat{\pi}_{pre_i} - \hat{\pi}_{post_i})$$

45. Where:

- ACR_i: The Average Causal Response for each market, i.
- β_{1_i}: The coefficient estimated from the previous stage for each market and each book.
- $\hat{\pi}_{pre_i}$: The average exposure to price walking in each market prior to GIPP implementation.
- $\hat{\pi}_{post_i}$: The average exposure to price walking in each market following GIPP implementation.

46. We interpret this ACR as the average effect on a policy. β_1 in each market is the effect GIPP had - the extent to which changes in total price of inception can be explained by the extent of price walking prior to GIPP's implementation. It is the difference between exposure = 0 and an average of exposure > 0. Therefore, multiplying this by the difference in average exposure to price-walking before and after GIPP implementation gives the policy-level response.

47. For each market, we also constructed a 95% confidence interval:

$$[ACR_i \pm 1.96se_i|\hat{\pi}_{pre_i} - \hat{\pi}_{post_i}|]$$

48. These confidence interval values mean that, upon repeated sampling, this range will contain the true value of the ACR for each market 95% of the time. It is constructed by constructing a minimum and maximum centred around the ACR for each market. The value used to construct the minimum and maximum is plus/ minus three terms multiplied together:

- 1.96: The critical value in the normal distribution associated with 95% confidence.

- se_i: The standard error of the estimate for each market.
- $|\hat{\pi}_{pre_i} - \hat{\pi}_{post_i}|$: The absolute value of the difference in the average exposure before and after treatment (although we expect the raw value of $\hat{\pi}_{pre_i} - \hat{\pi}_{post_i}$ to be positive regardless).

Identification assumptions

49. If certain assumptions are met, the DiD approach has a high level of internal validity. This is because it eliminates bias from both (i) time trends which affect both groups equally and (ii) time-invariant unobserved characteristics which differ across the treatment and control groups.

50. We assume there are no spillover effects, which refer to the impact of the treatment on untreated groups. As our treatment is continuous, this refers to the impact that treatment of higher exposure policy groupings has on lower exposure policy groupings. This assumption is crucial in order to ensure unbiased results. However, we cannot have full confidence in this assumption because of (1) within-firm effects and (2) general equilibrium effects.

- Some firms have variation in the amount they price-walked different policy groupings prior to the policy intervention. If these firms are forced to lower prices in higher exposed groups to eliminate price walking, they may rise prices in lower exposed groups to maintain the same profit levels.
- To illustrate potential general equilibrium effects, see the below diagram, Figure 2:

Figure 2: potential general equilibrium effects

51. In terms of market competitiveness, if the profitability of a firm can increase because of the intervention, there is a high risk of spillover effects. A firm which has different levels of price-walking across policy groupings can potentially increase their profitability by increasing the price on their lower price-walked policy groupings. Further, a firm which does not price walk prior to the intervention may be able to increase their profitability by raising prices while still capturing some previously price-walked customers.

52. As the intervention essentially makes price-walking firms behave like firms that never price-walked, it removes an anti-competitive practice. The market won't become less competitive, but our results may be biased as a result.

53. We also assume that there are no anticipation effects on insurance firms. Anticipation effects occur when firms begin to implement the policy early and are therefore compliant with the policy at an earlier date than the implementation date (which our difference-in-differences setup will be based around).

54. We conducted a qualitative survey alongside the transaction level data request. We asked firms: *"Did you change your pricing practices in response to the remedies prior to their implementation, or at/around the implementation date?"*. Many firms' responses indicated that they implemented changes to their pricing model prior to

the official starting date of GIPP (01/01/2022) to ensure they were compliant. This challenges our identification assumption, as the "before period" in the difference-in-differences may no longer be truly unaffected by GIPP.

55. This assumption was tested in several ways. Firstly, we measure compliance with the autorenewal remedy directly, through our data request, and for many policies these firms were compliant early. This data was combined with the pricing database for both home and motor markets and used as a control in some regression specifications – the directional effect of the pricing remedy was the same.

56. Secondly, the construction of the exposure variable allowed a further test for the no anticipation assumption. We explicitly construct the exposure variable to measure compliance with GIPP prior to the implementation, for each group. Therefore, we can confirm that the average degree of price walking was consistent along the pre-period. We can also caveat our results that without any anticipation effects, the effects we find may have been stronger, as there would have been further exposure to GIPP in the pre-treatment period.

57. A critical assumption of the DiD model is parallel trends. This assumption states that, in the absence of the treatment, prices in groups with different levels of price-walking intensity would have followed the same trends. This assumption ensures that any systematic divergence in prices after GIPP can be attributed to GIPP, rather than to pre-existing differences in trend. We discuss validation tests for this assumption below.

Results

Price-walking coefficients

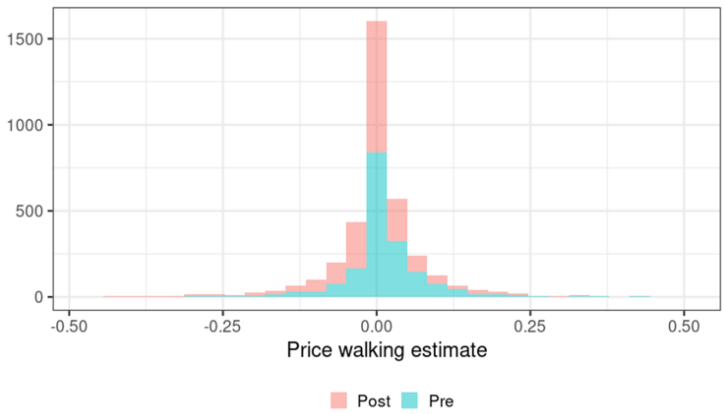
58. Figure 3 shows the distribution of price walking exposure coefficients (home & motor) broken down by the periods before and after GIPP was implemented.

59. In our CDiD setup, we rely on variation in treatment intensity across policy groupings. Without this variation, the estimated treatment effect would be unidentifiable as all groups would, in theory, report equal levels of price walking or lack thereof.

60. We observe variation in the magnitude of coefficients in the pre-GIPP period. This creates the foundation for a credible dose-response relationship in our model where greater pre-GIPP exposure to price walking corresponds to a larger expected impact from the introduction of GIPP.

61. Furthermore, we note that pre and post price-walking estimates differ in the sense that post-GIPP estimates are more centred around zero. This pattern indicates that our estimation approach is capturing meaningful differences in pricing behaviour over time. The convergence of exposure estimates toward zero post-GIPP aligns with the intended effect of eliminating (or at least significantly reducing) price walking, suggesting that GIPP has had a dampening effect across markets.

Figure 3: distribution of price walking exposure coefficients



Validation of model assumptions

62. The extent to which the parallel trends assumption is likely to be met in our context was assessed using event study regressions based on our continuous exposure measure. Figures 4 to 7 show the event study regression results for different insurance markets.

63. We found strong evidence for parallel trends prior to the intervention, even without conditioning on any control variables. Therefore, our main specification did not include covariates.

64. Coefficients measure the impact of GIPP for each indicated month, with respect to the month prior to implementation.

Figure 4: Event Study of Motor Policies

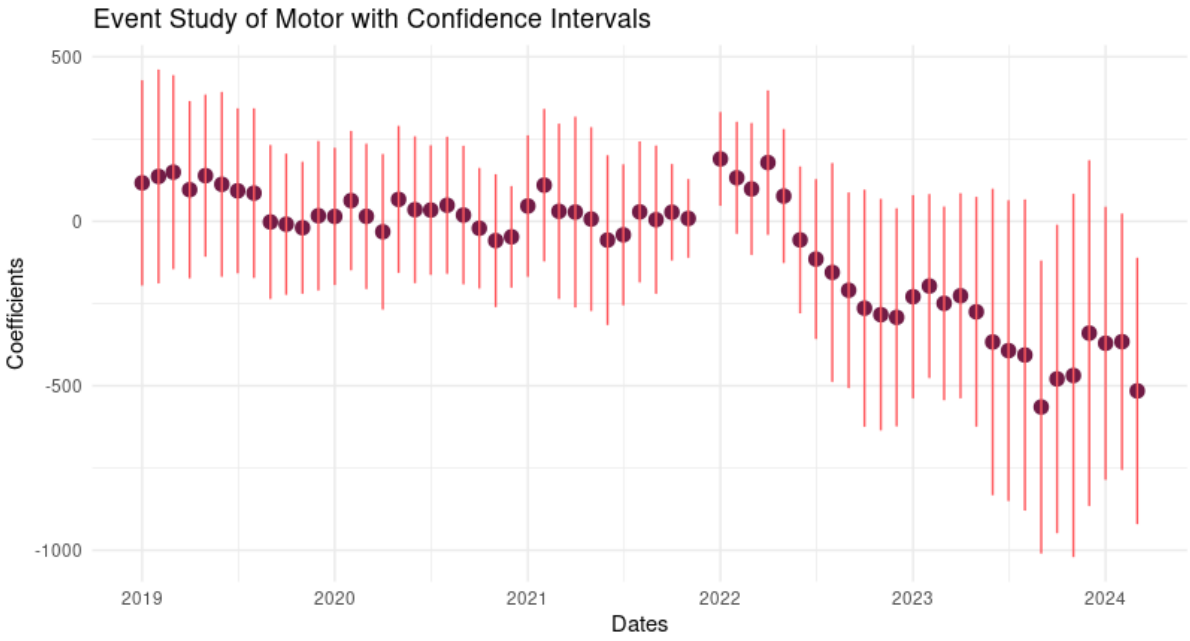


Figure 5: Event Study of Home (Combined) Policies

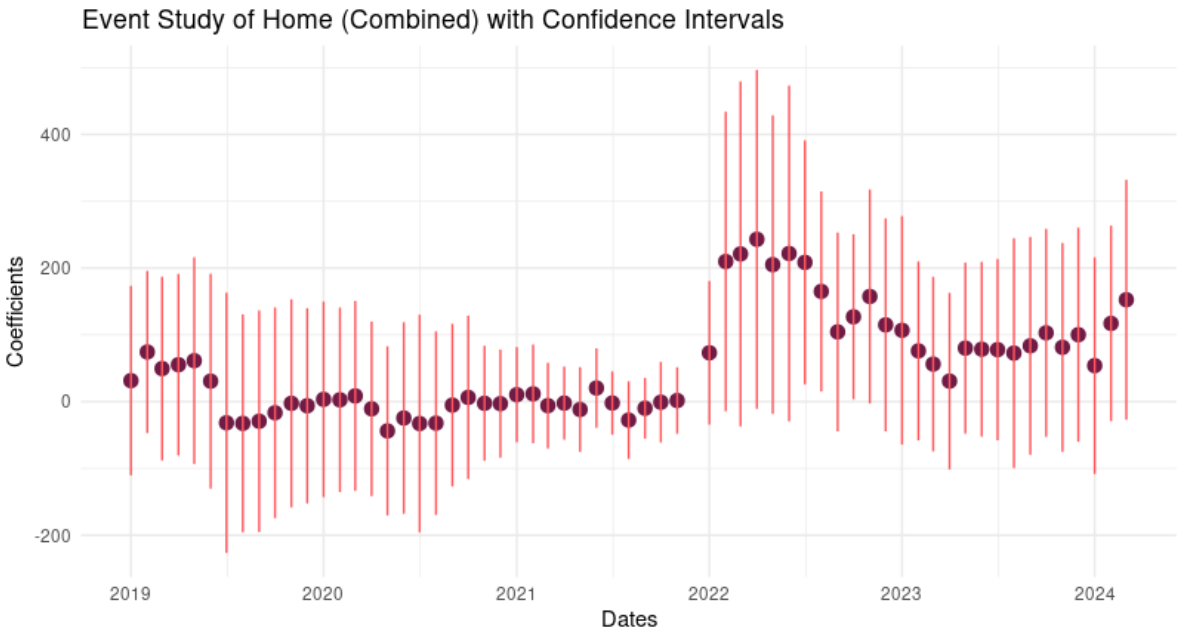


Figure 6: Event Study of Home (Buildings) Policies

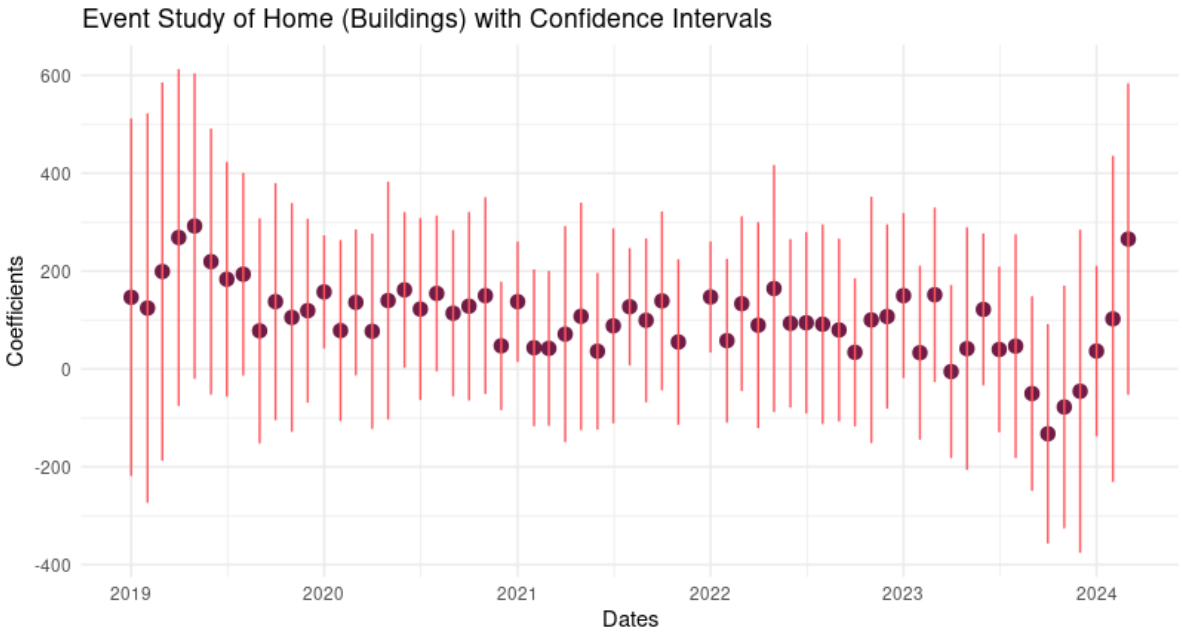
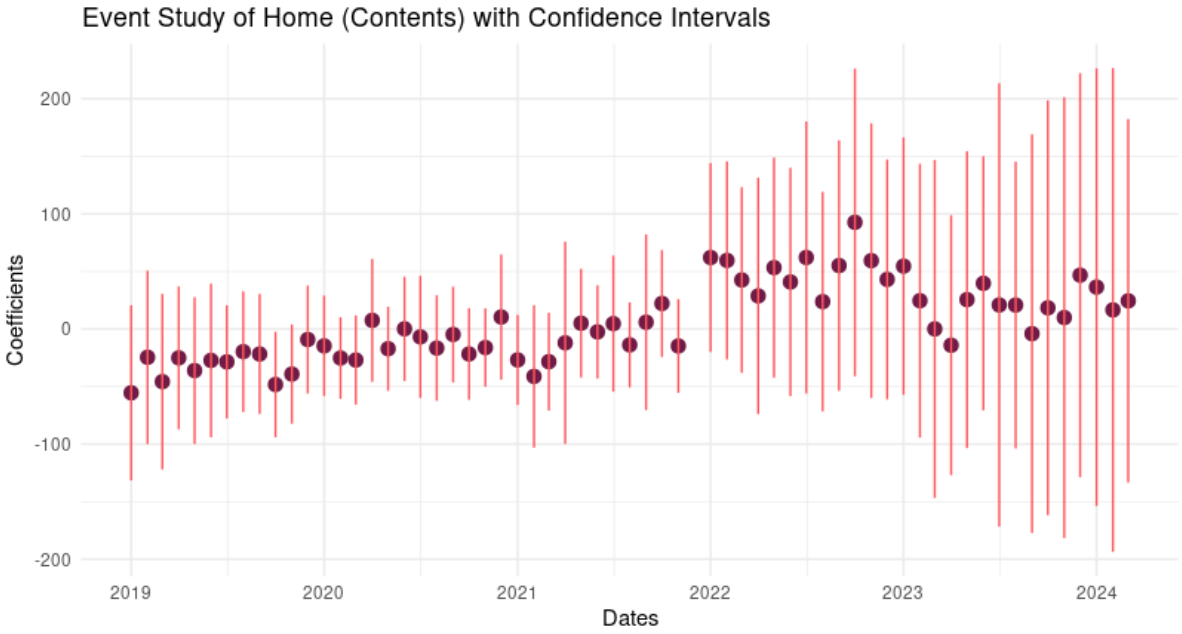


Figure 7: Event Study of Home (Contents) Policies



65. The results of our main regression specifications are presented below. These are broken into:

(1) The "Main Specification" which has no controls beyond the group and time fixed effects and removes outlier observations at the 2.5% level (Table 5). This is our main specification that is monetised, and is significant for each of the motor models, and for the front book for home buildings and home contents.

(2) Two versions that treats controls in the same way but handle outliers differently – one version removes no observations (Table 6) and the other removes observations at the 0.25% level (Table 7). These versions are both significant for the motor front book and back book, and for the front book for home buildings and home contents.

(3) A version that uses control variables – policy tenure, policy tenure squared, and additional fixed effects – postcode area, year of birth, autorenewal status, and vehicle ID (motor only) (Table 8). This uses both a full model, and a version with an interaction term instead of separate regressions for the front and back books. None of these results are statistically significant, however they are directionally consistent with the previous results. Given that we observe unconditional parallel trends, we rely on the results of the model that excludes covariates.

(4) A version that is the same as specification (1) in terms of controls and outliers, however it uses a univariate version of the stage 1 regression outputs, used as our exposure variable (Table 9). This is to verify that an exposure based on a pure regression of firm margin on policy tenure would yield the same results. This version is significant for the motor front book and back book, and for the front book for home buildings and home contents.

Table 5: Main specification

Model	Full Model	Front Book	Back Book
	(1)	**(2)**	**(3)**
Motor	**-247.02***	**-614.06*****	**-319.90*****
	(113.20)	(174.89)	(91.84)
	[10,592,931]	[3,734,777]	[6,858,150]
Home – Combined	123.84	-31.73	42.52
	(104.68)	(63.81)	(115.01)
	[4,904,552]	[1,137,123]	[3,767,429]
Home – Buildings	-43.79	**-295.84***	-90.95
	(87.77)	(120.86)	(99.61)
	[614,194]	[150,056]	[464,138]
Home - Contents	53.61	**-141.08****	55.04
	(54.15)	(45.64)	(43.00)
	[1,507,404]	[314,775]	[1,192,629]

*Note: *p<0.05; **p<0.01; ***p<0.001. Standard errors (in parenthesis) clustered at the policy grouping level. Number of observations is in square parenthesis.*

Table 6: Version without any observations removed

Model	Full Model	Front Book	Back Book
	(1)	**(2)**	**(3)**
Motor	-167.49	**-795.94***	**- 334.801***
	(196.78)	(325.02)	(135.35)
	[11,119,462]	[4,044,535]	[7,074,923]
Home – Combined	-1.39	-147.79	-121.90
	(208.11)	(135.67)	(251.02)
	[5,166,795]	[1,220,716]	[3,946,079]
Home – Buildings	-168.13	**-465.40***	-229.37
	(180.61)	(183.88)	(204.91)
	[647,011]	[161,114]	[485,897]
Home - Contents	70.13	**-229.60*****	85.69

	(52.11)	(64.51)	(42.11)
	[1,583,130]	[340,917]	[1,242,213]

*Note: *p<0.05; **p<0.01; ***p<0.001. Standard errors (in parenthesis) clustered at the policy grouping level. Number of observations is in square parenthesis.*

Table 7: Version with observations removed at the 0.25% level

Model	**Full Model**	**Front Book**	**Back Book**
	(1)	**(2)**	**(3)**
Motor	-210.19	**-783.32****	**-344.88****
	(163.14)	(271.67)	(124.25)
	[11,068,852]	[4,015,793]	[7,053,055]
Home – Combined	80.16	-74.00	-28.70
	(141.62)	(77.97)	(169.47)
	[5,139,335]	[1,213,089]	[3,926,246]
Home – Buildings	-103.69	**-395.79****	-162.83
	(131.65)	(151.65)	(151.58)
	[643,703]	[160,056]	[483,647]
Home - Contents	69.03	**-202.41*****	81.65
	(53.50)	(57.32)	(43.58)
	[1,574,821]	[338,849]	[1,235,972]

*Note: *p<0.05; **p<0.01; ***p<0.001. Standard errors (in parenthesis) clustered at the policy grouping level. Number of observations is in square parenthesis.*

Table 8: Version with controls

Model	**Full Model**	**Interaction Term**
	(1)	**(2)**
Motor	-156.98	-199.85
	(158.79)	(168.55)
	[10,591,077]	[10,591,077]
Home – Combined	72.08	-18.66
	(90.50)	(94.70)

	[4,691,122]	[4,691,122]
Home – Buildings	-78.13	-97.70
	(77.17)	(88.14)
	[598,249]	[598,249]
Home - Contents	43.32	29.52
	(48.64)	(39.24)
	[1,439,699]	[1,439,699]

*Note: *p<0.05; **p<0.01; ***p<0.001. Standard errors (in parenthesis) clustered at the policy grouping level. Number of observations is in square parenthesis.*

Table 9: Version based on a univariate stage 1

Model	**Full Model**	**Front Book**	**Back Book**
	(1)	**(2)**	**(3)**
Motor	-233.14	**-604.28****	**-348.87****
	(124.30)	(168.55)	(116.59)
	[10,625,898]	[3,750,898]	[6,874,996]
Home – Combined	89.56	-7.40	-21.78
	(116.18)	(44.86)	(124.19)
	[4,922,939]	[1,145,085]	[3,777,854]
Home – Buildings	-41.51	**-253.96****	-142.20
	(149.46)	(96.13)	(209.63)
	[621,210]	[152,615]	[468,595]
Home - Contents	36.74	**-107.61*****	53.28
	(51.10)	(28.67)	(60.90)
	[1,520,890]	[322,091]	[1,198,799]

*Note: *p<0.05; **p<0.01; ***p<0.001. Standard errors (in parenthesis) clustered at the policy grouping level. Number of observations is in square parenthesis.*

66. Even if the parallel trends assumption seems to be validated based on the event study graphs, we note that policies that were price-walked might be systematically different to policies that were not price-walked. This could be due, for instance, to different terms of risk or customer behaviour. This could be a threat to the parallel trends assumption, as it is less plausible that policies that are very different would follow similar trends without GIPP.

67. We investigated the breakdown of channels through which policies were sold by 'treatment' (i.e. policy groupings with exposure coefficients that were higher than the median value) and 'control' (where the exposure coefficient was below the median value).

68. Note that our treatment variable in the main model remains continuous. This binary breakdown is intended purely to investigate the extent to which the distribution channel of policies vary by intensity of treatment.

Table 10: Breakdown of distribution channel by policy grouping

Distribution channel	'Treated' policy groupings	'Control' groupings
Sold directly to consumer	28%	62%
Through an affinity partnership (net-rated)	2%	1%
Through an affinity partnership (gross-rated)	16%	16%
Through an intermediary (net-rated)	4%	4%
Through an intermediary (gross-rated)	3%	12%
Through an intermediary (net or gross-rated)	4%	1%
Through a Price Comparison Website (PCW)	42%	5%

Source: FCA, insurance pricing data (2019–2024)

69. As set out in Table 10 above, we note that policies that are more likely to be priced walked were sold through Price Comparison Website (PCW) websites. On the other hand, policies that were less likely to be price walked were sold directly to consumers. This indicates that our 'treatment' and 'control' groupings differ systematically in distribution strategy.

70. The implications of this finding are that there may be latent trends driven by customer acquisition channels. Groupings may not be randomly assigned, and treatment assignment may be endogenous (i.e. influenced by other factors). Indeed, channels like PCWs might have been on a different trajectory even without the introduction of GIPP. To the extent that the distribution channel is constant within each policy grouping, the above differences are accounted for by the policy grouping fixed effects in our main specification.

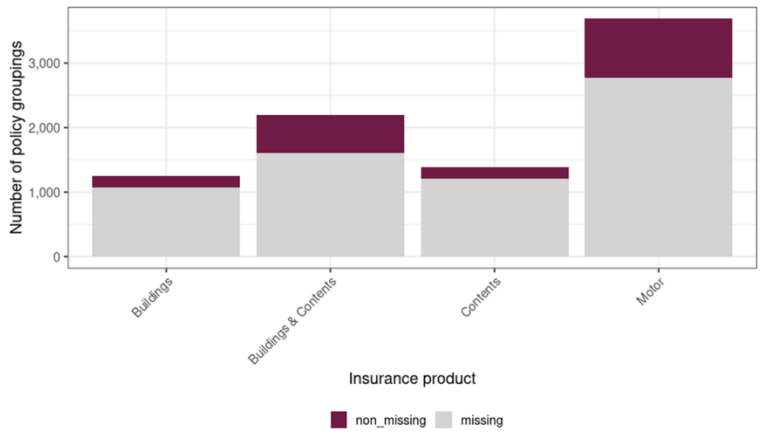
Diagnostic testing

71. We conduct a series of diagnostic tests to confirm the validity of our analysis.

Policy groupings by insurance product

72. When estimating price-walking coefficients (as described above), we may end up with very few observations per regression, resulting in no coefficient being estimated for some specifications. The extent of this is shown in Figure 8 below:

Figure 8: Policy groupings removed from the final regressions



73. The graph above plots the number of missing & non-missing policy groupings by insurance product. The graph indicates that there are a significant proportion of policy groupings that were excluded across all insurance products.

74. We investigate this further by testing several Stage 1 model specifications to determine the proportion of missing regression coefficients across group-specific regressions. We also calculate the proportion of missing policies associated with these groupings, relative to all the policies within groupings, shown in Table 11 below.

Table 11: proportion of missing coefficients (groupings) and the corresponding proportion of missing policies

Model specification	Proportion of missing β1 coefficients across all groupings	Proportion of missing policies across all groupings
Dependent variable: price margin **Controls: policy tenure**	31%	0.41%
Dependent variable: price margin **Controls: policy tenure, postcode area, year of birth, start year of policy**	46%	0.52%
Dependent variable: price margin **Controls: policy tenure, year of birth**	40%	0.49%

Dependent variable: price margin **Controls: policy tenure, year of birth, policy cover, policy excess, vehicle ID, book name, product name**	82%	1.08%

Source: FCA, insurance pricing data (2019–2024)

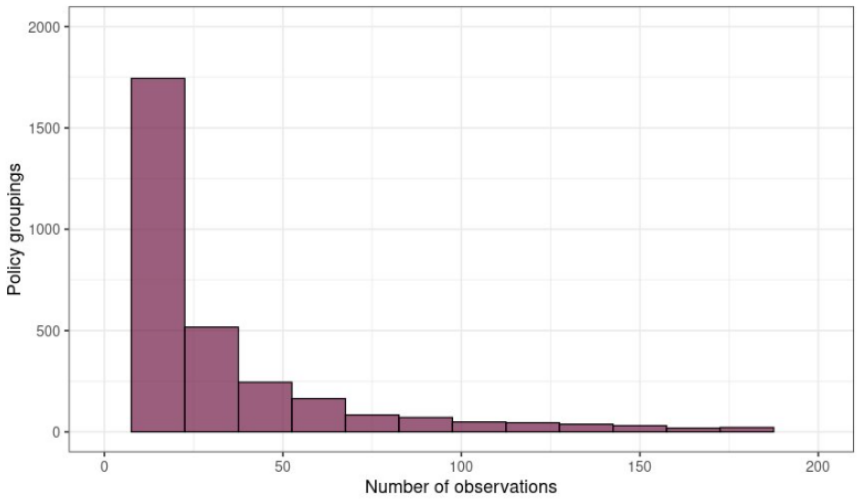
75. We see that, as the complexity of the model used in Stage 1 increases, the proportion of groupings for which we are unable to estimate a β1 coefficient rises sharply.

76. However, the number of policies within these missing policy groupings is very low across all model specifications. Essentially, 82% of missing policy groupings are only associated with c.1% of the total number of policies within our sample.

77. To further support this point, we estimate that the median number of policies within a policy grouping is 6. Given the median sample for a policy is so low, it is no surprise that a significant proportion of policy groupings are 'dropped' from the estimations.

78. Therefore, we conclude that, although a significant number of policy groupings are not associated with a β1 coefficient, the majority of our sample is retained within the subgroup of non-missing policy groupings.

Figure 9: Distribution of observations across groupings – groupings with less than 200 observations



79. Figure 9 above plots the number of policies associated with each policy grouping. This illustrates that we have enough observations for each policy grouping. For our analysis, we included groupings for which there were at least 200 observations per regression.

80. In designing the policy groupings, we faced an important trade-off. On one hand, it was crucial to define groupings that reflected how firms typically apply pricing strategies across similar types of customers - requiring enough granularity to capture the pricing strategies of firms across the board. On the other hand, incorporating too

many variables into the grouping definition increased the risk of creating a large number of small groupings with very few observations. This had the potential to reduce the reliability of our estimates and limit our ability to draw meaningful conclusions for those groupings.

81. Despite this trade-off, we are confident that the overall sample size across policy groupings is sufficiently large to support robust estimation**.** The distribution of policy counts across groupings shows that most have enough observations to reliably estimate price walking exposure.

Robustness checks

82. We tested different specifications for the continuous DiD model, to ensure the validity of our results. The checks related to the covariates used in the model, the way outliers were handled, and the way the exposure variable was handled.

83. As we had strong evidence of unconditional parallel trends between the treatment and control groups, we did not use covariates in the final continuous DiD model. However, harnessing our rich dataset to see if our findings were robust to different potentially confounding variables was useful.

84. We ran the cDiD model including the following covariates:
    - Autorenewal compliance (also used to test the autorenewal remedy adherence)
    - Postcode area
    - Month of policy inception
    - Year of birth
    - Tenure
    - Core ECC

    In each instance, the results were either not significant or remained directionally the same. Where they were not significant, this may be due to overfitting.

85. Further, data quality issues dictated that we had to remove some outlier observations based on core price plus IPT. Some unrealistically large and small total price at inceptions meant that the results using all the data were skewed, and not representative of the actual effect of GIPP on the market. Deciding what level of observations to remove was ultimately a trade-off between using as much data as possible while ensuring a representative sample.

86. Therefore, we ran the cDiD model with different levels of outliers removed: taking central ranges of 95%, 98%, and 99.8%, and one specification with specific values removed (total price of inception below £80/ £60 and above £10,000/ £5,000 for motor and home respectively), to see if this impacted our results. Again, the directional impact was the same, but the significance and magnitude reduced as the we kept more extreme observations.

87. We also ran a different specification of the exposure regression:

$$CoreMargin_i = \pi_g Tenure_i + \gamma_{1g} Year + \epsilon_{ig}$$

88. Each term is defined as in step 2. The regression model is the same, aside from it is univariate i.e., there are no covariates. The purpose of this robustness check was to determine if our results are impacted by the controls. The results of this regression had the same directional effect as the final specification.

89. We additionally tested the robustness of the exposure regression to the presence of outliers, as we did for our main cDiD model. As for the main model, the exposure coefficients did not vary significantly across specifications.

90. A further robustness check consisted of estimating the DiD model using a binary measure for exposure. The binary exposure variable was constructed using groupings with above-median exposure as treated, and those with below median exposure as controls. Results were qualitatively similar to the continuous specification.

91. Finally, we estimated a cDiD model with interaction terms between our exposure measure and an indicator variable for front-book and back-book customers, instead of the separate models presented in the main report. Once again, the results were qualitatively similar to the main specification.

Monetisation approach

92. To obtain monetised estimates, we first obtain the ACR of the intervention in each market where we have significant results and construct the 95% confidence interval. These confidence intervals then give a range of values for the change in price per policy as a result of GIPP.

93. We produce an annual figure representing the decrease in prices (i.e. reduction in firm revenue) across all policies in the UK motor market following GIPP. Our regression findings in the combined home market (full sample) are statistically insignificant and, therefore, are not monetised.

94. Using ABI data, we estimate the average number of annual motor policies across the post-GIPP period shown in Table 12 below.

Table 12: Annual number of motor policies

Year	Motor policies
2022	28.1 million
2023	27.6 million
2024	27.9 million
Average	**27.9 million**

Source: ABI, motor policy data (2022–2024)

95. Applying the average number of annual policies to the monetised motor policy-level estimates yields the following annual price savings to consumers, shown in Table 13 below:

Table 13: Annual consumer savings

Motor market (based on full sample)	Lower bound estimate	Central estimate	Upper bound estimate
Policy-level price reduction	£0.68	£6.63	£12.59
Average number of annual motor policies	27.9 million		
Annual saving to consumers (£)	**£19.0 million**	**£184.9 million**	**£350.9 million**

Source: FCA, insurance pricing data (2019–2024)

96. We estimate the annualized sum of present value benefits post-GIPP implementation. An example of this calculation, based on the central estimate annual saving of £184.9 million, is presented below. Future values are discounted at a rate of 3.5%, in line with HM Treasury Green Book guidance, shown in Table 14 below.

Table 14: Sum of present values calculation

Annual value (original)	£184.9m									
Time (t)	1	2	3	4	5	6	7	8	9	10
Discount rate	1	1.035	1.071	1.109	1.148	1.188	1.230	1.272	1.317	1.363
Discounted value	£184.9m	£178.6m	£172.5m	£166.7m	£161.0m	£155.6m	£150.3m	£145.3m	£140.3m	£135.6m
Sum of discounted (present values) across 10 years	**£1.59 billion**									

Source: FCA, insurance pricing data (2019–2024)

97. Based on the range of annual savings to consumers, the sum of PVs across a ten-year horizon period are presented in the main report, shown in Table 15 below:

Table 15: Price savings to motor consumers across a ten-year horizon

Sum of PVs across 10-year horizon period	Evaluation estimates
Lower bound estimate	£163.2 million
Central estimate	£1.59 billion
Upper bound	£3.02 billion

Source: FCA, insurance pricing data (2019–2024)