Mortgage Advice and Bank Accountability

A Corporate Governance Perspective

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Abstract

Mortgage advisors work for borrowers. Banks still decide which contracts to approve and at what price. We study how banks should govern this relationship, using supervisory records on 362,774 Israeli mortgages originated between 2014 and 2023. Borrowers who use advisors differ from those who do not. For one bank we address this selection with an instrumental-variable design based on distance to the nearest branch, under a maintained exclusion restriction. A channel decomposition links advice to longer effective duration and lower CPI indexation. Both dimensions contribute negatively to spreads in both market regimes. The remaining pricing component is positive when spreads are compressed and negative when they are elevated. Separate OLS comparisons find lower conditional spreads for advised loans within selected monthly upper tails. We use these results to discuss how banks govern delegated lending authority. Management information should explain pricing in the context of the borrower and the market. Contract disclosure and internal review should keep initial affordability separate from future exposure. Independent advice can strengthen the customer's position. Oversight of the bank's own offers and approvals remains the bank's responsibility.

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1 Introduction

Independent mortgage advice raises a governance question for banks. A borrower can hand comparison and negotiation to an outside representative. The lender still approves the contract and sets its price. Advice may improve the customer's position, and it also changes the information and incentives at origination. The bank needs to know how representation affects the loans it makes and how its staff use their lending authority when an advisor is involved.

We study this question in Israel. Israeli mortgages usually combine several sub-loans that differ in rate-reset terms, CPI indexation, and maturity. The borrower chooses a set of exposures, not a single interest rate. A low initial payment can go together with high sensitivity to inflation or to future rate changes. A higher price can go together with a contract the household prefers. Oversight of origination has to cover the whole contract and the reasons it was approved.

Our contribution is to link the evidence on independent advice to accountability inside the bank. The governance issue is how pricing and approval decisions taken by staff become visible to management, to the control functions, and to the board. An advisor may negotiate well. That does not show that the borrower understands the loan, and it does not show that the bank's offer was appropriate. Those judgments depend on the contract, on the customer's situation, and on how the decision was explained.

The data are supervisory records on 362,774 residential mortgages originated in Israel between 2014 and 2023, about 60 percent of the market in that period. We identify advice through the advisor's registration as the borrower's power of attorney. We measure price with the Z-spread over a risk-free benchmark curve, adjusted for inflation expectations. The Z-spread allows comparison across contracts with several components. The contract data then show which exposures came with that price.

The results show that the presence of an advisor is not, by itself, a good indicator of a favorable loan. Advice is selected. Younger borrowers and borrowers with higher measured risk are more likely to be represented, and so are borrowers who take larger or more leveraged loans. Advised contracts also have different effective duration and CPI indexation. In the channel decomposition, these two dimensions contribute negatively to spreads in both the compressed-spread and the elevated-spread regimes. The remaining pricing component is positive in compressed-spread periods and negative in elevated-spread periods. Observed changes in contract design and unexplained pricing variation have to be read separately.

Separate OLS comparisons find lower spreads for advised loans within the monthly upper tail of the spread distribution. The difference is clearest at the deepest threshold. This result adds to the average comparisons by pointing at unusual outcomes. It describes conditional spreads within selected samples. It says nothing about the probability of receiving a high-spread loan. For governance, it is a reason to look at pricing patterns that an aggregate channel statistic can hide.

The paper builds on work that relates financial advice to information, incentives, and borrower search (Inderst and Ottaviani, 2012; LaCour-Little, 2009; Woodward and Hall, 2012). Professional help can make comparison easier. Its quality cannot be inferred from the fact that a borrower delegated the task (Mullainathan, Noth, and Schoar, 2012). Allen et al. (2025) stress borrower

selection in mortgage intermediation. Chung et al. (2024) study broker use, borrower confusion, and contract preferences. The Israeli setting differs in one institutional respect. The independent advisors we study are paid by borrowers, not through lender commissions. Information and service quality still matter under that fee structure.

Related Israeli work shows why product understanding matters for the governance of origination. Ilan and Mugerman (2025a) document that unadvised borrowers respond differently to current inflation and to inflation expectations, and they interpret the pattern through financial literacy and anchoring. Ilan and Mugerman (2025b) find that low-SES borrowers choose lower initial PTI and LTV but still carry repayment exposure that is sensitive to inflation; their assessment of the later pressure is based on simulation. Both studies tie borrowing decisions to how households read future exposure. They give context for our framework. They do not show that advice corrects these decisions.

We move that perspective from household choice to oversight inside the bank. Management needs information that separates changes in who the customers are from changes in contracts and prices. The control functions need a basis for assessing unusual offers and departures from approved practice. The board is concerned with the policies behind those decisions and with whether management can account for the outcomes. This follows the Basel Committee's emphasis on board oversight, risk management, and effective control functions (Basel Committee, 2015).

The empirical contribution is the evidence on advice, contract design, and pricing. We use it to build a governance framework for Israeli banks. We do not estimate the effect of a board structure or of a new regulation. The implications concern the bank's own offers and approvals. Professional representation can complement oversight. Accountability for the lending decision stays with the bank.

Section 2 describes the Israeli setting. Section 3 develops the governance framework. Sections 4 and 5 present the data, the empirical design, and the evidence on pricing and contracts. Section 6 discusses implications for governance in Israel, and Section 7 sets out the limits of the evidence. Section 8 concludes.

2 The Israeli Mortgage Market and the Governance Boundary

2.1 Contract complexity and independent representation

An Israeli mortgage usually consists of several parallel sub-loans. The sub-loans differ in CPI indexation, interest-rate structure, maturity, and repayment schedule. Borrowers combine fixed-rate and resettable components into a loan mix. The mix determines how inflation and rate changes affect payments and balances. Contractual maturity sets the repayment horizon. Effective duration also depends on the timing of the combined cash flows and on when rates reset. Two offers with similar headline rates can be very different contracts.

Independent advisors help borrowers obtain offers, compare them, and deal with the banks. An advisor appears in our data when registered as the borrower's power of attorney. The indicator shows that the borrower was represented during origination. It does not record what the advisor

recommended, how much search took place, or whether the borrower understood the recommendation.

Advisors in this setting are paid by the customer, usually a flat fee agreed in advance. In the institutional setting we describe, they receive no indirect compensation from banks. This sets them apart from lender-paid brokers. It also makes commission-based explanations of the pricing differences less relevant. Payment by the borrower removes one conflict of interest. The customer still finds it hard to judge the advisor's effort and expertise.

During the sample period there was no formal licensing of mortgage advisors. Every advised transaction still went through the bank's own approval and pricing process. Licensing of advisors and governance inside the lender concern different decisions. Our focus is the bank's responsibility for the offers it makes and the loans it approves.

2.2 Responsibility for the lending decision

The advisor acts for the borrower. The advisor is not an agent to whom the bank has outsourced origination. The bank's governance perimeter is defined by the bank's own decisions: which products to offer, how to assess applications, and how to approve terms and prices. Oversight can respect the customer's choice of representative and at the same time require a clear account of what the bank did.

An advisor's recommendation may shape the loan mix the borrower asks for. The lender still writes and approves the contract, and its explanation should make the exposures clear. A higher spread on an advised loan does not, on its own, show that the borrower was treated badly. The gap may come from borrower risk, from the product mix, from negotiation, or from factors we do not observe. Good governance puts these explanations up for review. It does not attach a verdict, good or bad, to the advisor indicator.

Direct borrowers belong in the same framework. Negotiation can legitimately produce different offers. Management still needs to understand the discretion that lending staff exercise. The question is whether the process allows a consistent account of why terms differ and of when an outcome needs a closer look. Independent representation adds outside discipline. The bank's internal controls have to cover the whole origination process.

3 A Governance Framework for Advisor Mediated Lending

3.1 Representation as an information channel

Advice can improve a borrower's understanding of the products and organize comparison across lenders. An advisor may explain unfamiliar terms or point to alternatives the household would have missed. The bank then faces a customer whose requests and bargaining position differ from those of a direct borrower. Representation can change both the contract requested and the offer made.

A power of attorney identifies a representative. It does not certify that the customer understands the loan. A governance gap opens if the bank treats that authority as enough assurance about the final commitment. Recording representation is useful. The lending process also needs a clear explanation of the product and a documented basis for approval.

Advisors often make similar recommendations across clients, which simplifies a complex choice. A preference for lower indexation or for a different fixed-rate mix may help a household handle an exposure it does not know well. Whether it suits a given borrower depends on that borrower's goals and circumstances. The bank's oversight should keep the link between the contract offered and the reasoning given to the customer. It should not infer suitability from the fact that a professional was involved.

3.2 Pricing discretion and market conditions

Representation may affect price through bargaining, through communication, or through the way the application is handled. We do not observe these channels directly. The empirical framework measures the pricing associated with advice after accounting for the recorded contract dimensions. What remains is a finding that needs an explanation, not a measured bargaining mechanism.

The benchmark matters for interpretation. A compressed spread does not mean a low nominal rate or a small monthly payment. The benchmark curve can move so that spreads narrow while the household's cost of borrowing rises. Our regime comparisons are about mortgage spreads. Management information should keep that margin separate from affordability.

A blanket target for advisor discounts would hide these relationships. A pooled difference mixes changes in borrower composition, in contract structure, and in market conditions. Oversight should first ask whether those features explain the offer in its context. It should then examine the remaining variation where that is warranted. This turns a channel comparison into a question about the lending process.

The governance issue is whether delegated authority is matched by enough information for oversight. Lending staff use discretion in negotiation and approval. Management has to make the resulting patterns understandable to the control functions and to the board. The board deals with the policies that govern that discretion and with how management responds to departures from them. It does not deal with individual negotiations. Advisor involvement matters because it changes the setting in which these delegated decisions are made.

3.3 Contract suitability and borrower understanding

Mortgage choice spreads exposure over time. Lower CPI indexation reduces the share of principal linked to inflation. A different effective duration changes the cash-flow and rate-reset profile. Campbell and Cocco (2003) treat these choices as part of household risk management. Mortgage risks are related to debt literacy and advice in van Ooijen and van Rooij (2016). The best arrangement depends on the household, not only on the price.

Israeli evidence makes this distinction practical. Ilan and Mugerman (2025a) relate the indexation choices of unadvised borrowers to different responses to current and expected inflation. Ilan and Mugerman (2025b) separate conservative initial borrowing ratios from later exposure, when indexed payments grow relative to income. We draw one governance inference. When a contract is explained, initial affordability and the borrower's reading of future exposure should be considered together.

A pricing difference cannot tell us what a mortgage is worth to a household. The data do not reveal the customer's preference for stable payments or the net benefit once advisor fees are paid. A

premium may come with an exposure the borrower wanted. A discount may come with one the borrower does not understand. Accountability requires a reviewable link between the product offered, the explanation given, and the decision approved.

The framework does not ask boards to choose loan mixes. It asks management to keep the information needed to assess the bank's decisions. The separate measures of duration, maturity, indexation, and spread show which dimensions a useful review should keep.

4 Data and Empirical Design

4.1 Sample and variables

The data are regulatory records of mortgage originations by Israeli commercial banks in 2014-2023. We drop balloon and bridge loans that are not identified as the primary property-purchase loan, and we drop loans issued for purposes other than housing. The sample contains 362,774 residential mortgages. It covers about 60 percent of originations in the period and includes the major lenders.

Advisor equals one when an advisor is registered as the borrower's power of attorney. A customer who negotiated directly may have received informal help that the records do not show, so the indicator measures registered involvement only. The contract data cover amount, maturity, effective duration, CPI indexation, PTI, LTV, and loan purpose. The borrower data cover age and the lender's internal risk classification. Macroeconomic conditions are matched to the origination date.

Table 1 reports descriptive statistics. Property value and loan amount are in nominal millions of NIS. PTI and LTV are percentages. Indexed is the CPI-linked share of principal on a 0-1 scale. The socio-economic decile describes the neighborhood, not the borrower's financial literacy. The indexation comparisons use decile groups. The advisor-type model also uses a low-income indicator. The two measures should not be read as the same thing.

Risk marks the upper quartile of each bank's internal risk distribution. It is a within-bank classification, not a common external credit score. Its mean in Table 1 refers to the retained sample and does not imply the same high-risk share at every lender. The controls allow comparisons across observed loans. They do not capture every factor behind a lending decision.

4.2 Measuring mortgage pricing

The Z-spread prices a multi-component mortgage against a benchmark term structure. We take the promised cash flows, a risk-free zero-coupon curve, and projected inflation, and we solve for the constant spread that discounts the cash flows to the initial principal:

$$P = \sum_{t=1}^{T} \frac{CF_t}{(1 + r_t + z)^t} \tag{1}$$

where P is the initial principal, CF_t is the contractual cash flow at time t, r_t is the benchmark discount rate, and z is the Z-spread. The calculation uses the full term structure. It allows negative spreads when the loan is priced below the benchmark. Table 1 shows the observed dispersion.

The Z-spread is a standardized price. It complements the contract characteristics. It does not reveal borrower preferences, and it does not net out the advisor's fee. A benchmark-adjusted premium is also not the same as a nominal mortgage rate. These distinctions matter whenever pricing evidence is used to judge affordability or suitability.

The regime comparisons follow the empirical tables. Spreads were compressed in 2014-2016 and in 2023 and elevated in 2017-2022. These periods organize the reported relationships. They do not isolate the causal effect of a change in market spreads, since other conditions also changed over time.

4.3 Selection and the distance instrument

We relate registered advisor use to demographic, loan, and transaction characteristics with logistic regressions. Table 2 adds controls step by step and includes the stated time effects. The analysis documents selection patterns. It does not estimate a causal effect of these characteristics on the demand for advice.

One bank provides geographic information. For that bank we instrument advisor use with the distance from the borrower's home to the nearest branch that offers mortgages. A nearby branch makes direct contact and negotiation easier. A distant branch may raise the demand for a representative. The borrower does not have to take the loan at the nearest branch. The first stage is:

$$A_i = \alpha_0 + \alpha_1 D_i + \alpha_2 X_i + u_i \tag{2}$$

where A_i indicates registered advice, D_i is the distance to the nearest branch, and X_i holds the borrower, loan, and time controls. The first-stage F-statistic is 24.4. The instrumental-variable specification in Table 3 uses 82,228 observations from the bank with geographic data. Borrower-branch pairs more than two kilometers apart are excluded from the geographic design.

The second stage relates the spread to fitted advisor use:

$$Z_i = \beta_0 + \beta_1 \hat{A}_i + \beta_2 X_i + \varepsilon_i \tag{3}$$

where Z_i is the Z-spread and $\hat{A}_i$ is the fitted value from the first stage. A causal reading of the advisor coefficient requires that distance affect pricing only through advice, given the controls. Local competition, neighborhood characteristics, branch access, and branch practices could all violate that exclusion restriction. The two-kilometer limit supports the argument. It does not prove the assumption.

Standard errors are clustered by branch to allow for within-branch dependence. Clustering addresses inference. It does nothing about omitted variables or instrument validity. Similar OLS patterns at other banks show that the relationships hold more widely, but they do not validate the distance design. The instrumental-variable estimate applies to the focal bank and to the variation in advice that distance induces.

The contractual controls raise one more point of interpretation. Some contract features may themselves change with advice. A coefficient that conditions on those features differs from an effect that includes every change in loan design. The pooled regression in Table 3 and the decomposition in Table 6 answer related but different questions.

4.4 Channel decomposition and complementary comparisons

The decomposition links fitted advisor propensity to the contract dimensions, and the contract dimensions to pricing. Each alpha measures how a mediator shifts with fitted advice. The matching beta is that mediator's conditional pricing loading. The product of the two is the contribution assigned to that dimension. Appendix A sets out the framework and the inference procedure.

Instrumenting advice does not identify the causal pricing effect of each mediator. Unobserved determinants of contract choice and price can affect the channel estimates. We treat the decomposition as a conditional accounting of pricing relationships. The remaining component captures advisor-related pricing variation beyond the recorded dimensions. It does not separate negotiation from processing.

The advisor-heterogeneity analyses cover 2020-2023. The labels occasional, intermediate, and expert are based on advisory activity, not on credentials. The analysis does not provide numerical cutoffs for the categories. Both the category models and the pricing regressions are observational.

For the upper-tail regressions, we compute monthly percentile thresholds separately for advised and non-advised loans. We keep the observations above each group's threshold, balance the two groups within each month, and pool the selected loans in an OLS regression with contractual controls. The comparison concerns conditional pricing within those samples. It is not a quantile regression and not an instrumental-variable estimate. It does not identify the probability of entering a common high-spread tail.

5 Evidence on Advice and the Governance of Lending Outcomes

5.1 Selection into representation

Table 2 links advisor use to younger age and higher measured credit risk. In the full model the age coefficient is -0.0201, an odds ratio of 0.9801. The high-risk coefficient is 0.2508, an odds ratio of 1.2851. Loan amount, PTI, and LTV all have positive coefficients. Advised and direct lending reach different borrowers.

The socio-economic pattern is less clear. In the full model the middle decile group has a positive coefficient. The coefficient of the highest group is not statistically different from the omitted lowest group. This does not show that the poorest borrowers rely most on advice. Neighborhood status is also not a measure of individual financial knowledge. Existing customers and buyers of new homes are less likely to be represented in the full model.

For governance, these results show that customer composition matters. A raw comparison between channels can attribute differences in risk or in transaction characteristics to the origination process. Management review should separate those dimensions before reading an advisor premium or discount. Registration shows that the customer was represented. It does not show why the customer sought advice or how much independent comparison took place.

5.2 Pooled pricing and contractual controls

Table 3 reports pricing coefficients in basis points. The advisor coefficient is 30.49 in the all-bank OLS model and 22.47 in the OLS model for the geographic bank, with standard errors of 2.27 and 2.54. The 2SLS coefficient for the geographic bank is 41.30, with a standard error of 23.83. The instrumental-variable estimate is much less precise. All specifications condition on the borrower and contract characteristics shown in the table.

Effective duration has a negative coefficient in every column. Contractual maturity has a positive one. Indexed exposure, scaled in 10-percentage-point units, has a positive loading. The risk premium is larger in the all-bank regressions than in the focal-bank regressions. One lender's pricing process should not be taken as representative of all banks. The negative policy-rate coefficient refers to the benchmark-adjusted spread, not to the nominal cost of financing.

The pooled advisor premium has to be read together with the contract. The recorded features are in the regressions, so the advisor coefficient leaves out the design changes that come with representation. The next comparisons describe those differences directly. The decomposition then connects them to pricing in each regime.

5.3 Contract design and the explanation of exposure

Table 4 compares effective duration within bins of original maturity. The overall advised-minus-non-advised differences are 0.221 years in 2014-2016, 0.082 years in 2017-2022, and 0.374 years in 2023. These are unadjusted differences, and they come from a different design than the instrumented shifts in Table 6. The overall direction is positive. Some individual maturity bins are negative or imprecise.

The pattern fits a different fixed-versus-resettable profile in advised mortgages. Effective duration is not the same as repayment maturity. The comparisons do not identify the recommendation or the preference behind any one loan. The finding is about the contracts that reach the lender's approval process.

Table 5 shows lower CPI-linked shares for advised loans in every decile group and PTI stratum displayed. For PTI at or below 30, the overall differences are -5.272, -9.409, and -7.141 percentage points across the three subperiods. For PTI above 30, they are -5.307, -7.766, and -6.390 percentage points. The subgroup pattern varies. Higher payment pressure does not narrow the indexation gap in a uniform way.

These design differences put the content of the contract at the center of the governance argument. Lower indexation reduces one specific inflation exposure. A different duration changes the cash-flow and reset profile. Neither of these, alone, ranks the contract's value to the household. The inflation-choice evidence in Ilan and Mugerman (2025a, 2025b) adds a reason to explain future exposure alongside the initial payment.

The lender's review needs more than a record that an advisor took part. It needs a basis for understanding the mix that was offered and the explanation that went with it. The comparisons motivate this priority. They do not prove that the observed shifts made individual choices better or worse.

5.4 State dependent pricing channels

Table 6 separates the contract contributions from the remaining pricing variation. In compressed-spread periods, the duration alpha is 1.9863 and its beta is -0.0848. The reported contribution is -0.1685 percentage points. The indexation alpha is -0.0319 and its beta is 1.5224, for a contribution of -0.0486 percentage points. The residual component is 0.5101 percentage points. In this regime the recorded contract channels and the residual work in opposite directions.

In the elevated-spread regime, duration has an alpha of 1.2578 and a beta of -0.1198, a contribution of -0.1507 percentage points. Indexation has an alpha of -0.0226 and a beta of 1.9927, a contribution of -0.045 percentage points. The remaining component is -0.1426 percentage points. Here the contract components and the residual share the same negative sign.

Term, PTI, LTV, and risk have zero alpha entries in the table. The table does not show standard errors or confidence intervals for the channel products or for the residuals. Their precision cannot be inferred from the significance of an alpha or a beta alone.

The sign change in the residual matters for governance. Differences in duration and indexation do not account for the whole pricing relationship across regimes. Bargaining, application handling, and lender discretion may all feed into the remaining variation. The decomposition cannot tell them apart. The question for the bank is how the offer was set and approved in its market context.

The estimates also weaken an explanation based only on the cost of more conservative contracts. Duration and indexation contribute negatively to spreads in both regimes. The positive component in compressed-spread periods is the residual. Oversight should keep this distinction in view when it looks at pricing and product decisions together.

5.5 Advisor heterogeneity

Table 7 compares the occasional, intermediate, and expert categories. Measured risk and loan amount are positively associated with the intermediate and expert categories relative to occasional advice. The low-income indicator is negative in the expert comparison. These relationships describe segmentation within advised loans. They do not describe the demand for advice in the full borrower population.

The specifications with contractual covariates also relate effective duration to category. The dependent variable is still advisor type. These are not estimates of what an advisor causally recommends. Customer selection and advisory practice can both drive the observed link between contract and category.

Table 8 reports an OLS coefficient of -10.28 basis points on the expert indicator, with a standard error of 2.73, given its controls. The lower spread is consistent with differences in service, in negotiation, or in product matching. It is also subject to selection. An activity-based category is not a certificate of competence.

For banks, the evidence warns against treating registered advice as one uniform service. Identifying representatives makes repeated interactions reviewable. Advisor labels should not replace the bank's own standards for its offers and approvals. The governance task is how the bank handles the transaction, not a causal ranking of individual advisors.

5.6 Pricing within the monthly upper tail

Table 9 reports the upper-tail comparisons in percentage points. In the compressed-spread regime the advisor coefficients are -0.015, -0.035, and -0.090 at Q75, Q90, and Q95. The clearest statistical support is at Q95. In the elevated-spread regime the corresponding coefficients are -0.076, -0.136, and -0.194. In both regimes the negative association grows at deeper thresholds.

These patterns are consistent with advisors negotiating where prices are relatively high. The selection procedure balances the groups within each month and compares loans above their own group's thresholds. It does not remove unobserved differences. The estimates describe pricing among selected observations. They do not show that advice keeps loans out of the tail, and they are not evidence of misconduct.

The implication for the bank is to look at the distribution of outcomes, not only at average pricing. An unusually high benchmark-adjusted spread can reflect risk, contract features, or legitimate discretion. It can also point to a decision that needs an explanation. Review should weigh those reasons using information on the transaction. An extreme value is not, by itself, a finding of improper conduct.

Such a review should cover both advised and direct lending. An outside representative can improve the customer's position. The bank's ability to account for its decisions should not depend on whether the borrower had one. The upper-tail evidence connects outside representation to a wider question about the lender's internal governance.

6 Implications for Corporate Governance

The findings connect mortgage advice to the governance of decisions made inside the bank. Representation changes the setting in which staff negotiate and approve loans. Responsibility for the bank's offers stays with the bank. The implications below concern how management information and effective review can support that delegated authority. They are proposals for oversight. They are not an assessment of compliance with any particular legal duty.

6.1 Management information and board oversight

Management reporting should present advisor involvement in the context of the customers and contracts that come through that channel. The selection results show why a raw advised-versus-direct comparison can mislead. The regime comparisons show why a pooled pricing difference can hide the underlying relationship. Reporting that ties representation to borrower risk, to contract composition, and to the spread environment at the time would give management a more useful picture of the business being originated.

That picture should connect day-to-day discretion to the control functions and the board. Staff may negotiate different offers. The authority to do so should be clear, and departures from approved policy should be available for review. The board oversees the policies and the information that support this process. Management and the control functions can then judge whether the observed patterns fit those policies and whether a change calls for an explanation or for action.

The empirical distinctions matter here. A benchmark-adjusted spread measures something different from a nominal rate or an initial payment. Effective duration differs from contractual maturity. A channel can look favorable on one measure and still expose borrowers to a different payment path. Keeping these distinctions in management information stops a narrow pricing target from standing in for origination quality.

6.2 Contract explanation and initial affordability

The contract-design results make the explanation of future exposure central to oversight. Lower CPI indexation changes the share of principal linked to inflation. Effective duration captures a different part of the cash-flow and rate-reset profile. How much either feature matters depends on the household. A useful explanation links the loan mix on offer to the borrower's stated goals and makes the payment and exposure trade-offs understandable.

Initial affordability is only part of that explanation. Ilan and Mugerman (2025b) show that conservative payment and leverage ratios at origination can go together with repayment burdens that are sensitive to inflation later on. This evidence is a reason to consider how contractual payments and household income may diverge. The governance implication is to explain the conditions under which a manageable initial payment could become a heavy one. The ratio at origination is not a complete account of affordability.

Documentation can make that explanation available for review. It should identify the contract the bank offered, the information the bank supplied, and the recorded reasons for the choice and the approval. Where payment stability or concern about inflation shaped the transaction, the record should connect that goal to the relevant loan features. The control functions then have a basis for assessing the process. They do not have to assume that a lower spread means a better contract.

Representation should complement this process. The bank can communicate through an authorized advisor and still keep a clear record of its own explanations and decisions. This keeps the advisor's service to the borrower separate from the lender's responsibility for the product it offers.

6.3 Pricing discretion and unusual outcomes

The pricing evidence supports reviewing typical outcomes and also loans with unusually high benchmark-adjusted spreads. The upper-tail comparisons suggest that average differences between advised and direct loans can miss what happens among high-spread contracts. Such loans deserve attention. Their pricing rationale should be understandable inside the bank, after allowing for legitimate differences in borrower risk and contract features.

A review should ask whether those features and the permitted pricing discretion explain the offer, and whether any departure from approved policy was authorized. Documentation makes that assessment possible. The existence of a document does not show that the price or the contract was appropriate. An effective control process evaluates the rationale and, where needed, escalates an unresolved issue to management.

The decomposition helps organize the inquiry. Recorded changes in duration and indexation contribute negatively in both regimes. The remaining pricing component changes sign. That points to

parts of negotiation and approval that lie outside the displayed contract dimensions. The residual is a starting point for inquiry. It does not diagnose the mechanism behind any individual outcome.

The same approach should apply to customers who negotiate on their own. Advisor use differs across borrower groups, and the advisor categories are linked to different outcomes. If the bank's offers are understandable and reviewable in both channels, internal governance does its job whether or not the customer managed to obtain effective representation.

6.4 Independent representation and external governance

Because Israeli advisors are paid by borrowers, the quality and scope of representation become the main agency question. Direct payment makes commission-based explanations less relevant. The borrower still needs to understand what service is being bought. Clear information about the advisor's fee, role, and scope of work can complement the bank's explanation of the mortgage.

Inside the lender, consistent procedures for recognizing authorized representatives and for communicating offers can clarify how an application moves from negotiation to approval. The activity-based advisor categories tell us about observed segmentation. They should not replace the bank's standards for the transaction. A favorable average for one category says little about any particular recommendation or loan.

Internal and external governance complement each other. Standards for representation concern the relationship between advisor and borrower. The bank's controls concern its own offers and delegated decisions. When those responsibilities stay clear, independent advice adds scrutiny without becoming a substitute for the bank's own oversight.

7 Interpretation and Limits

The empirical evidence is about mortgage outcomes. It is not about observed differences in board effectiveness or internal controls. It does not evaluate a governance intervention, and it does not tell us whether Israeli banks already follow the practices discussed above. The contribution is to identify the parts of origination that matter for oversight and to explain how they relate to the bank's decisions.

Registered involvement captures formal representation. Informal help, search effort, and the content of the advice are not observed. Borrower preferences and financial literacy may affect both advisor use and contract choice. The distance instrument gives an identification argument for the bank with geographic information, conditional on the exclusion restriction. A strong first stage and similar OLS patterns elsewhere do not establish that assumption, and they do not extend the estimate to every borrower. Some contractual controls may also respond to advice. A conditional advisor coefficient is therefore not an effect that covers all contract changes.

The decomposition divides pricing into recorded contract channels and a remaining component, under its maintained assumptions. Instrumenting advice does not identify each mediator's pricing effect, and the residual can contain unobserved determinants of price. The advisor-category and upper-tail models are observational. The upper-tail models compare conditional spreads in selected monthly tails. They do not estimate the probability of an extreme outcome, and they do not identify misconduct.

A spread comparison is not a welfare measure. The analyses do not estimate the net value of advice after fees, and they do not tell us how borrowers value different payment and exposure profiles. The contract differences identify things to explain and review. They do not identify a loan mix that everyone should prefer. The evidence can guide inquiry inside the bank. The assessment of any particular decision rests on the information and the approval process that applied to it.

8 Conclusion

Independent mortgage advice matters for corporate governance because it changes the setting in which Israeli banks exercise lending discretion. Our evidence shows that representation is selected and that advised loans have a different contractual profile. Their pricing relationships vary across market regimes and across parts of the spread distribution. A bank needs to understand the transaction itself, not just whether an advisor was present or what the average spread in the advisory channel was.

The decomposition makes this concrete. Duration and indexation contribute negatively to spreads in both regimes. The remaining pricing component changes sign. Contract design and pricing have to be considered together, without assuming that one explains the other. The upper-tail comparisons add a reason to examine unusually high spreads along with typical outcomes. Related work on inflation information and affordability in mortgage choice supports this wider view of the contract (Ilan and Mugerman, 2025a, 2025b).

For Israeli bank governance, the practical contribution is to connect delegated lending authority with the information that makes oversight meaningful. Management reporting should explain channel patterns in their borrower and market context. Contract explanation should make future exposure understandable. Review should check whether unusual outcomes and departures from policy have a sound basis. Independent advice can strengthen the borrower's part in this process. Accountability for the bank's offers and approvals stays with the bank.

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Table 1 Descriptive Statistics

Variable	n	Mean	Median	sd	Min.	Max.
Value of Asset	362,774	1.828	1.570	1.255	0.078	76.000
PTI	362,774	25.001	25.575	9.108	2.000	50.000
LTV	362,774	55.315	58.000	16.178	0.000	95.000
Advisor	362,774	0.331	0.000	0.470	0.000	1.000
Term	362,774	23.259	25.000	6.430	0.500	35.000
Investment	362,774	0.132	0.000	0.339	0.000	1.000
Primary Market	362,774	0.366	0.000	0.482	0.000	1.000
Socio-decile	362,774	7.078	7.000	2.084	1.000	10.000
Customer	362,774	0.561	1.000	0.496	0.000	1.000
Loan Amount	362,774	0.823	0.725	0.578	0.001	24.000
Indexed	362,774	0.346	0.332	0.284	0.000	1.000
Z-spread	362,774	1.871	1.840	1.104	-4.985	12.626
Duration	362,774	4.218	4.039	2.000	0.083	20.000
Socio group	362,774	2.327	2.000	0.688	1.000	3.000
Index_k	362,774	1.320	0.802	1.878	-1.573	5.385
Index_b	362,774	1.391	0.904	1.910	-1.573	5.385
Index_Exp5	362,774	1.804	1.580	0.700	-0.053	3.329
Index_Exp10	362,774	1.951	1.748	0.469	0.652	2.923
BOI Rate	362,774	0.649	0.100	1.128	0.100	4.750
Risk	362,774	0.191	0.000	0.393	0.000	1.000
Age	362,774	39.078	38.000	10.158	14.000	100.000

Notes: All variables are measured at origination unless otherwise stated. n is the number of non-missing observations; sd is the standard deviation. Property value and loan amount are in nominal millions of NIS. PTI is the initial monthly payment as a percentage of gross income; LTV is principal as a percentage of property value. Advisor records a registered borrower representative. Term and effective Duration are in years. Investment, Primary Market, and Customer are indicators for an investment property, new-home purchase, and existing bank customer. Socio-decile measures neighborhood socio-economic status; Socio group is its coarse grouping. Indexed is the CPI-linked principal share on the 0-1 scale. Z-spread is in percentage points. Index_k and Index_b are realized-inflation measures; Index_Exp5 and Index_Exp10 are inflation-expectation measures. BOI Rate is the policy rate. Risk is the within-bank upper-quartile risk indicator. Age is in years. Appendix B provides reporting conventions.

Table 2 Selection into Mortgage Advice

Variable	Demographic Coefficient	Demographic Odds ratio	Loan controls Coefficient	Loan controls Odds ratio	Full model Coefficient	Full model Odds ratio
Age	-0.0281*** (0.0004)	0.9723	-0.0194*** (0.0004)	0.9808	-0.0201*** (0.0004)	0.9801
Socio (5-7)	0.0900*** (0.0125)	1.0942	0.0169 (0.0129)	1.0171	0.0795*** (0.0131)	1.0827
Socio (8-10)	-0.0581*** (0.0127)	0.9435	-0.1126*** (0.0142)	0.8935	-0.0106 (0.0147)	0.9895
Risk	0.4221*** (0.0097)	1.5252	0.2935*** (0.0099)	1.3411	0.2508*** (0.0101)	1.2851
Term			0.0224*** (0.0007)	1.0227	0.0229*** (0.0007)	1.0232
Loan Amount			0.0544*** (0.0079)	1.0559	0.0439*** (0.0080)	1.0449
PTI			0.0105*** (0.0005)	1.0105	0.0121*** (0.0005)	1.0121
LTV			0.0090*** (0.0003)	1.0090	0.0090*** (0.0003)	1.0090
Investment					-0.0338* (0.0132)	0.9667
New House					-0.2276*** (0.0082)	0.7964
Existing Customer					-0.4963*** (0.0079)	0.6088
Observations	362,774		362,774		362,774	
Log-Likelihood	-198,420		-196,167.2		-193,807	
AIC	396,854		392,356.5		387,644	

Notes: Dependent variable: registered advisor use. The specifications report logit coefficients and odds ratios. Demographic columns include age, socio-economic groups, and risk; loan columns add the displayed loan characteristics; the full model adds transaction and customer indicators. The omitted socio-economic group is deciles 1-4. Year fixed effects for 2017-2021 and 2022-2023 are included, with 2014-2016 omitted. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Estimates and significance markers are retained as reported.

Table 3 Mortgage Pricing with and without Instrumented Advice

Variable	All banks OLS	All banks OLS + advisor	Geographic bank OLS	Geographic bank OLS + advisor	Geographic bank 2SLS
Advisor (1/0)		30.49*** (2.27)		22.47*** (2.54)	41.30** (23.83)
Duration (years)	-12.99*** (0.82)	-12.98*** (0.78)	-11.93*** (0.67)	-11.93*** (0.69)	-11.94*** (0.71)
Indexed (10%)	12.40*** (0.56)	13.25*** (0.55)	17.29*** (0.75)	17.69*** (0.73)	18.24*** (0.90)
Term (years)	2.88*** (0.21)	2.47*** (0.22)	3.36*** (0.19)	3.14*** (0.17)	2.86*** (0.26)
Risk (1/0)	28.39*** (2.39)	25.66*** (2.20)	3.30 (2.11)	1.91 (2.14)	0.10 (2.66)
BOI Rate (100 bp)	-4.24*** (0.51)	-6.89*** (0.49)	-7.44*** (0.69)	-8.66*** (0.70)	-10.25*** (1.69)
Observations	362,774	362,774	82,228	82,228	82,228
Adjusted R^2	0.201	0.229	0.31	0.32	0.30

Notes: Dependent variable: Z-spread in basis points. All-bank columns are OLS without and with Advisor. The geographic-bank columns are OLS without and with Advisor, followed by 2SLS instrumenting Advisor with nearest-branch distance. The first-stage F-statistic is 24.4. Duration and Term are in years; Indexed is in 10-percentage-point units; Risk is an indicator; BOI Rate is in 100-basis-point units. Standard errors, in parentheses, are clustered by branch. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Original estimates, standard errors, and markers are retained; the interpretation of the instrumental-variable estimate takes account of its displayed uncertainty.

Table 4 Effective Duration Differences within Maturity Bins

Term (years)	2014–2016 (1)	2017–2022 (2)	2023 (3)
15-16	-0.081 (0.115)	-0.231*** (0.040)	-0.109 (0.072)
17-18	0.528*** (0.134)	-0.023 (0.032)	0.350*** (0.069)
19-20	0.225*** (0.055)	-0.072** (0.027)	0.277*** (0.062)
21-22	0.107 (0.057)	0.145*** (0.027)	0.446*** (0.060)
23-24	0.232*** (0.044)	0.168*** (0.022)	0.293*** (0.048)
25-26	0.216*** (0.040)	0.019 (0.019)	0.288*** (0.040)
27-28	0.085* (0.039)	0.097*** (0.014)	0.150*** (0.029)
29-30	0.419*** (0.048)	-0.011 (0.013)	0.311*** (0.027)
Overall	**0.221***** **(0.020)**	**0.082***** **(0.008)**	**0.374***** **(0.017)**

Notes: Entries are unadjusted differences in mean effective duration, in years, between advised and non-advised loans within original-maturity bins. Positive values indicate longer effective duration among advised loans. Duration reflects the cash-flow and rate-reset profile and is distinct from original maturity. The Overall row pools the maturity bins within each subperiod. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5 CPI Indexation Differences by PTI and Decile Group

Income Decile	2014–2016 (1)	2017–2022 (2)	2023 (3)
PTI ≤ 30			
1-4	-8.102*** (0.513)	-12.361*** (0.639)	-9.685*** (0.398)
5-7	-6.245*** (0.228)	-11.733*** (0.283)	-8.175*** (0.176)
8-10	-4.119*** (0.233)	-7.061*** (0.234)	-5.960*** (0.161)
Overall	**-5.272***** **(0.155)**	**-9.409***** **(0.175)**	**-7.141***** **(0.114)**
PTI > 30			
1-4	-7.248*** (0.536)	-8.044*** (0.624)	-7.276*** (0.405)
5-7	-4.869*** (0.329)	-7.509*** (0.365)	-5.813*** (0.242)
8-10	-4.718*** (0.447)	-7.355*** (0.387)	-6.320*** (0.285)
Overall	**-5.307***** **(0.238)**	**-7.766***** **(0.245)**	**-6.390***** **(0.168)**

Notes: Entries are unadjusted advised-minus-non-advised differences in the CPI-linked principal share, in percentage points. Rows use the decile groups and PTI strata of the reported analysis. The decile labels follow the original table; the socio-economic measure is described in Section 4.1. PTI is the initial payment-to-income percentage. The Overall row pools the decile groups within each PTI stratum and subperiod. Standard errors are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6 Contract Channels and Remaining Pricing Variation

Compressed spreads: 2014-2016 and 2023. Elevated spreads: 2017-2022.

Dimension	Compressed Alpha	Compressed Beta	Compressed Effect	Elevated Alpha	Elevated Beta	Elevated Effect
Duration	1.9863*	-0.0848***	-0.1685	1.2578	-0.1198***	-0.1507
Term	0	0.0214***	0	0	0.0236***	0
Indexed	-0.0319*	1.5224***	-0.0486	-0.0226**	1.9927***	-0.045
PTI	0	0.0031***	0	0	0.0025*	0
LTV	0	0.0008	0	0	-0.0002	0
Risk	0	0.1237***	0	0	0.1761***	0
Advisor (residual path)			0.5101			-0.1426

Notes: Alpha relates instrumented advisor propensity to each dimension. Beta is the conditional pricing loading. Effect is the reported alpha-beta contribution to the Z-spread in percentage points. The instrument is nearest-branch distance. Duration and Term are in years; Indexed is a 0-1 principal share; PTI and LTV are percentages; Risk is an indicator. Models include the stated controls and time effects, with branch-clustered inference. The residual row reports advisor-associated pricing not explained by the observed dimensions; it does not separately identify bargaining or lender discretion. Zero entries and significance markers are retained as reported. Separate standard errors for products and residuals are not displayed. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Appendix A describes the framework.

Table 7 Selection and Contract Associations by Advisor Category

Variable	Borrower covariates Intermediate	Borrower covariates Expert	Contract covariates Intermediate	Contract covariates Expert
Age	-0.004* (0.002)	-0.012*** (0.003)		
Low-income indicator	0.027 (0.085)	-0.257*** (0.087)		
High-risk borrower	0.172*** (0.051)	0.261*** (0.067)		
Investment loan	0.065 (0.072)	0.002 (0.066)		
New-house purchase	0.112** (0.045)	0.117* (0.062)		
Existing Customer	-0.091** (0.037)	-0.093* (0.048)		
Loan Amount	0.104*** (0.036)	0.128** (0.051)		
PTI	-0.011*** (0.003)	-0.008** (0.004)	-0.008*** (0.003)	-0.005 (0.004)
LTV	0.001 (0.002)	0.001 (0.002)	0.002 (0.001)	0.004*** (0.002)
Term (years)			0.012** (0.005)	0.011 (0.007)
Effective Duration (years)			-0.049*** (0.018)	-0.082*** (0.030)
Indexed exposure			0.026 (0.162)	-0.149 (0.263)
Observations	113,824	113,824	113,824	113,824
Log-Likelihood	-24,398.43	-28,551.78	-24,472.05	-28,696.97

Notes: Dependent variable: advisor activity category, labeled occasional, intermediate, and expert. The multinomial-logit columns compare intermediate and expert categories with occasional advice. Columns 1-2 use borrower and loan covariates; columns 3-4 include the displayed contractual covariates. The latter are associations with advisor category, rather than direct estimates of advisor recommendations. The sample consists of advised loans originated in 2020-2023. Coefficients are log-odds. Standard errors in parentheses are clustered by branch. The activity labels do not establish qualifications. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 8 Advisor Activity Category and Mortgage Pricing

Variable	Coefficient (standard error)
Term (years)	2.04*** (0.22)
Expert Advisor	-10.28** (2.73)
Indexed exposure	1.21*** (0.06)
Duration	-7.86*** (0.64)
Income decile	0.22 (1.06)
Risk	20.04*** (1.75)
Prime Rate	-4.57*** (1.10)

Notes: OLS estimates for mortgage Z-spread in basis points, using the 2020-2023 advisor-heterogeneity analysis. Term and effective Duration are in years; Indexed exposure is the CPI-linked share in percent; Risk is the within-bank high-risk indicator; Prime Rate is measured at origination. Expert Advisor is the activity-category indicator. Standard errors are clustered by branch. Estimates and significance markers are retained as reported. The category comparison is observational. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 9 Conditional Pricing in Selected Monthly Upper Tails

Compressed spreads: 2014-2016 and 2023. Elevated spreads: 2017-2022.

Variable	Compressed Q75	Compressed Q90	Compressed Q95	Elevated Q75	Elevated Q90	Elevated Q95
Advisor	-0.015 (0.015)	-0.035 (0.026)	-0.090** (0.040)	-0.076*** (0.006)	-0.136*** (0.010)	-0.194*** (0.014)
Duration	-0.085*** (0.005)	-0.105*** (0.008)	-0.112*** (0.009)	-0.033*** (0.002)	-0.024*** (0.003)	-0.009** (0.005)
PTI	-0.007*** (0.001)	-0.008*** (0.001)	-0.009*** (0.001)	-0.001*** (0.0003)	0.003*** (0.001)	0.005*** (0.001)
Indexed	0.047*** (0.003)	0.022*** (0.004)	0.001 (0.006)	0.030*** (0.001)	0.007*** (0.002)	-0.003 (0.003)
Term	0.007*** (0.001)	-0.004* (0.002)	-0.0002 (0.003)	-0.002*** (0.001)	0.002*** (0.001)	0.003*** (0.001)
LTV	-0.004*** (0.0004)	-0.004*** (0.001)	-0.004*** (0.001)	0.001*** (0.0002)	0.001* (0.0003)	0.001** (0.0005)
Risk	0.173*** (0.012)	0.140*** (0.020)	0.136*** (0.030)	0.040*** (0.007)	0.048 (0.011)	0.117*** (0.015)
Constant	2.622*** (0.034)	3.553*** (0.057)	4.035*** (0.078)	3.400*** (0.015)	3.933*** (0.024)	4.359*** (0.036)
Observations	20,052	8,039	4,034	65,192	26,124	13,097
R^2	0.038	0.034	0.025	0.018	0.010	0.022
Adjusted R^2	0.037	0.033	0.024	0.018	0.010	0.021

Notes: Dependent variable: Z-spread in percentage-point units. Within each calendar month, thresholds are computed separately for advised and non-advised groups. Observations above each group-specific threshold are selected, balanced by advisor status within month, and pooled for OLS. The displayed observations are the post-balancing counts. Controls include Duration, PTI, Indexed share, Term, LTV, and Risk. The columns compare pricing within selected tail samples; they are not quantile regressions and do not identify the probability of entering a tail. Standard errors are in parentheses. Original coefficients and markers are retained. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix A The Channel Decomposition

A1 Contract feature equations

Fitted advisor propensity comes from the distance first stage. For contractual dimension k, the framework relates the observed mediator to that fitted propensity and to the controls:

$$M_{ik} = \alpha_{0k} + \alpha_{1k}\hat{A}_i + X_i'\Phi_k + \delta_t + \varphi_j + \mu_{ik} \tag{A1}$$

where M_{ik} is the contract feature, X_i is the control vector, δ_t are time effects, and φ_j are branch effects. The coefficient α_{1k} measures the shift in the mediator associated with fitted advisor use. The reported dimensions are effective duration, term, CPI indexation, PTI, LTV, and the internal risk indicator. Table 6 states their units.

A2 Pricing loadings and channel contributions

The pricing stage relates the spread to the observed dimensions and the controls:

$$Z_i = \beta_0 + \sum_k \beta_k M_{ik} + X_i'\Psi + \delta_t + \varphi_j + \varepsilon_i \tag{A2}$$

The coefficient β_k is the pricing loading on mediator k, conditional on the specification. Its product with the corresponding alpha is the channel contribution:

$$\Delta_k = \alpha_{1k} \cdot \beta_k \tag{A3}$$

The product links a change in the recorded contract to its conditional pricing relationship. A causal reading of each channel needs more than a relevant distance instrument. It needs no unobserved confounding between mediator and price, and a correctly specified sequence of relationships. We use the decomposition to organize the pricing evidence. We do not treat each product as a separately randomized effect.

A3 Remaining pricing variation

The pricing stage gives a predicted spread. The residual is the difference between the actual and the predicted spread. The framework then relates that residual to fitted advisor propensity:

$$\varepsilon_i = Z_i - \hat{Z}_i; \qquad \varepsilon_i = \theta_0 + \Delta_R\hat{A}_i + \delta_t + \varphi_j + \xi_i \tag{A4}$$

where Δ_R is the remaining advisor-associated component. It can contain negotiation or processing effects. It can also reflect unobserved determinants of pricing. The subscript does not stand for a measured behavioral mechanism. Table 6 reports this component next to the contractual contributions.

A4 Aggregation and inference

The aggregate pricing effect is the sum of the contractual contributions and the remaining component:

$$TE = \sum_{k \in M} \Delta_k + \Delta_R \tag{A5}$$

Inference uses 1,000 branch-level bootstrap resamples. The full sequence of equations is re-estimated in each resample. Resampling branches preserves within-branch dependence. This supports inference under the estimation design but does not resolve the identification concerns. Table 6 reports the component estimates without separate confidence intervals for the products or the residual. Our discussion does not claim more precision than the table shows.

Appendix B Variable Definitions and Reporting Conventions

Advisor is a binary indicator of formal registration as the borrower's power of attorney. The advisor activity categories in Tables 7 and 8 are labeled occasional, intermediate, and expert. The labels describe the reported categorization. They do not establish credentials or a causal ranking of advice quality.

Z-spread is the constant premium over the risk-free benchmark term structure, adjusted for inflation expectations, that discounts the contractual mortgage cash flows to principal. Table 1 reports it in percentage points. Tables 3 and 8 report pricing coefficients in basis points. Tables 6 and 9 use percentage points for spread effects. The units have to be kept apart when estimates are compared.

Duration is effective duration in years. It reflects the combined cash-flow and interest-rate-reset profile. Term is contractual maturity in years. Table 4 compares unadjusted mean duration within maturity bins. Table 6 reports model-based shifts and channel contributions. The two sets of entries are not interchangeable.

Indexed is the CPI-linked share of mortgage principal. Table 1 records the share on a 0-1 scale. Table 3 scales it in 10-percentage-point units. Table 5 reports differences in percentage points. Table 6 uses the 0-1 share for its alpha and beta entries. The exposure variable in Table 8 is in percent. Table 9 keeps the exposure scaling of its reported specification.

PTI is the initial monthly mortgage payment as a percentage of gross monthly income. LTV is principal as a percentage of property value. Property value and loan amount in Table 1 are in nominal millions of NIS. Socio-economic decile describes neighborhood status in the descriptive and advisor-use data. Risk identifies the within-bank upper quartile of the internal credit-risk measure.

The tables keep their original estimates, standard errors, and significance markers. Interpretation rests on the numbers and on the design of each specification. Conditional pricing coefficients, decomposition components, and upper-tail comparisons answer different questions and are not interchangeable effects. A zero entry in Table 6 does not mean that the dimension cannot matter in another model.