



Branch Network Optimization

The Clean Slate Approach

THE ART OF POSITIONING

bancography

BRANCH PRODUCT RESEARCH BRAND

Branch Network Optimization: The Clean Slate Approach

Introduction

Bancography's branch optimization projects can build a long term branching strategy for any market area.

Bancography's optimization projects use a 'clean slate' approach in which all potential submarkets are evaluated in the context of the bank's strategic objectives and target segments but independent of the institution's current branch locations.

- ▶ The initial analysis is freed from any historic biases arising from the bank's current network configuration.
- ▶ Once the current network is overlayed to the clean slate, it reveals branch gaps, additional potential available from current branches, and closure opportunities.
- ▶ The franchise of any bank can be mapped against the clean slate network to determine how an acquisition candidate's franchise aligns with the target franchise, and the latent 'upside potential' available from that institution's branches.

The State of the Branch Environment

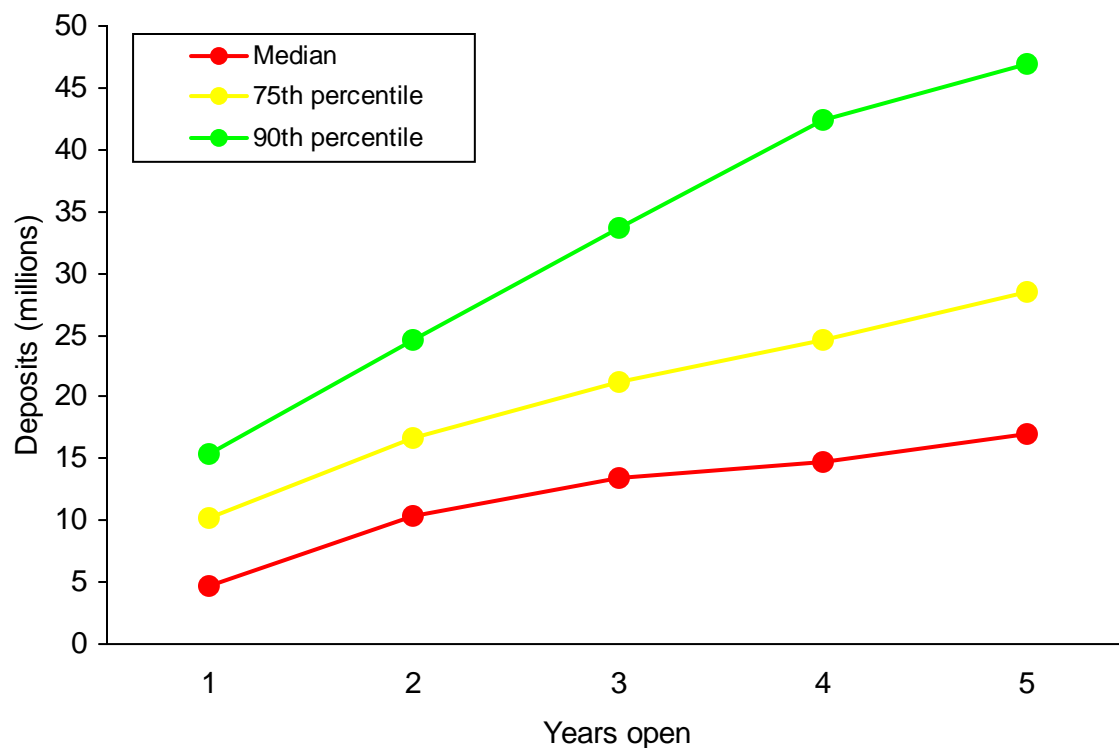
▶ *The branching boom continues...*

- ▶ 116,000 branches nationwide.
- ▶ Average planned network increase 8%.
- ▶ Average cost of planned branches \$2,500,000:
 - ▶ Land \$1,100,000
 - ▶ Building \$1,400,000
- ▶ Aggregate planned branch capital investment industry wide: \$23 billion.

The State of the Branch Environment

▶ *...even as performance lags expectations*

- ▶ Median deposits of new free standing branches after five years is only 17M.
- ▶ Only 14% of new branches exceed 40M in deposits after five years.



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▶ *Define guiding principles*

Facilitate a session to articulate guiding principles to govern the optimization process. Learn the bank's philosophy regarding the following:

- ▶ Primary demographic segments
- ▶ Growth expectations and parameters
- ▶ Distribution philosophy
- ▶ Views on competitors
- ▶ Financial hurdles: ROE, ROI, IRR

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▶ *Submarket definition*

The term submarket refers to a destination point that serves as a current or potential branch location and its associated drawing area. Submarkets are centered at areas of retail, commercial, or residential concentration.

- ▶ Each submarket is defined by an address that identifies the center of the submarket, and a collection of census block groups.
- ▶ All submarkets are defined exclusively, so that no block group belongs to more than one submarket. This insures that the sum of demand across the submarkets in a market does not exceed the demand of the market overall.
- ▶ The reach of a submarket is inversely proportionate to its surrounding population density. Thus, submarkets in dense urban areas will draw from a 1 – 1.5 mile range; suburban submarkets draw from a 2 – 3 mile range; and rural submarkets may encompass up to a 5 mile range.

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▶ *Estimate market demand*

Use internal and secondary sources to build submarket level demand estimates for all consumer and small business deposit and loan products. Optional overlays can add wealth management, mortgage, large commercial, and ATM products and services.

- ▶ The model is derived from the Federal Reserve Board's Survey of Consumer Finances and is corroborated with various primary research sources, and reconciled against the FRB's Flow of Funds Accounts tables.
- ▶ Consumer demand: Checking, Savings, Money Market, CDs, Installment Loans, Equity Lines and Loans.
- ▶ Small business demand: Deposits, Operating and Equipment Loans, Real Estate Loans.
- ▶ Optional products: Mortgage, Large Commercial Deposits and Loans, Trust, Securities, ATM Transactions (foreign and on-us).

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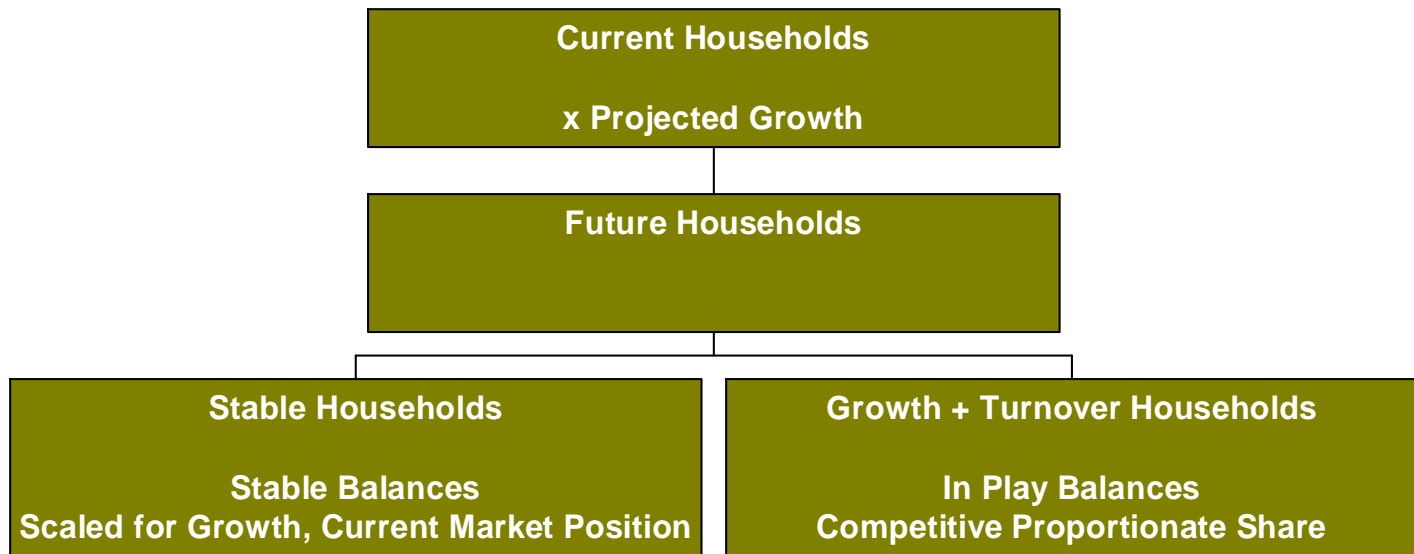
▶ *Forecast market penetration*

Projected branch balances are calculated for each submarket by multiplying total market demand by an estimate of market penetration. The market penetration estimate is a function of:

- ▶ Five year household growth rate
- ▶ Proportion of stable versus 'in play' households
- ▶ Number of competitors in the submarket
- ▶ The institution's current market position, as defined by both its submarket level household penetration and its market level outlet share
- ▶ The current outlet share impacts all branches' likelihood of capturing deposits in a relationship quantified by the network effect (explained on a subsequent slide)

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► *Forecast market penetration*



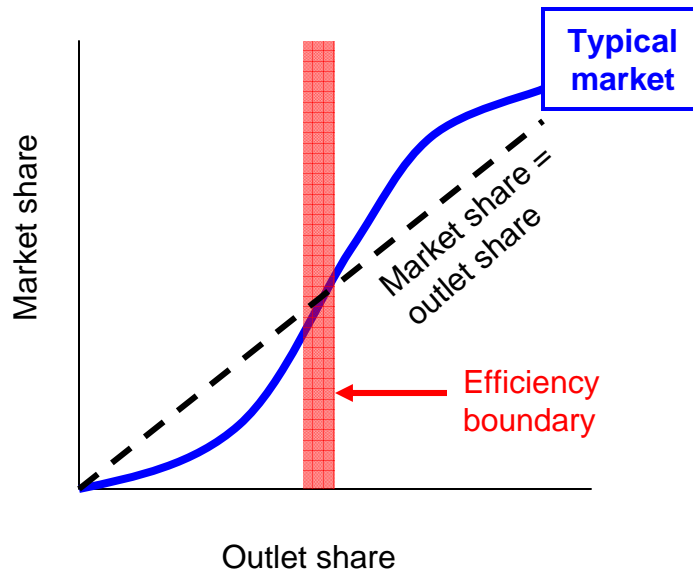
- Note that the stable household penetration factor is a function of the bank's outlet share, and can thus be adjusted for various branch growth scenarios, e.g. incremental branching, third-place outlet share, or net post-merger outlet share.

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► *The network effect*

In markets of all sizes, larger institutions capture a disproportionate share of balances – for example, a ten branch network will gain more than twice as much as a five branch network. As consumers reward convenient institutions, each successive branch provides an incremental lift to the other branches in the network.

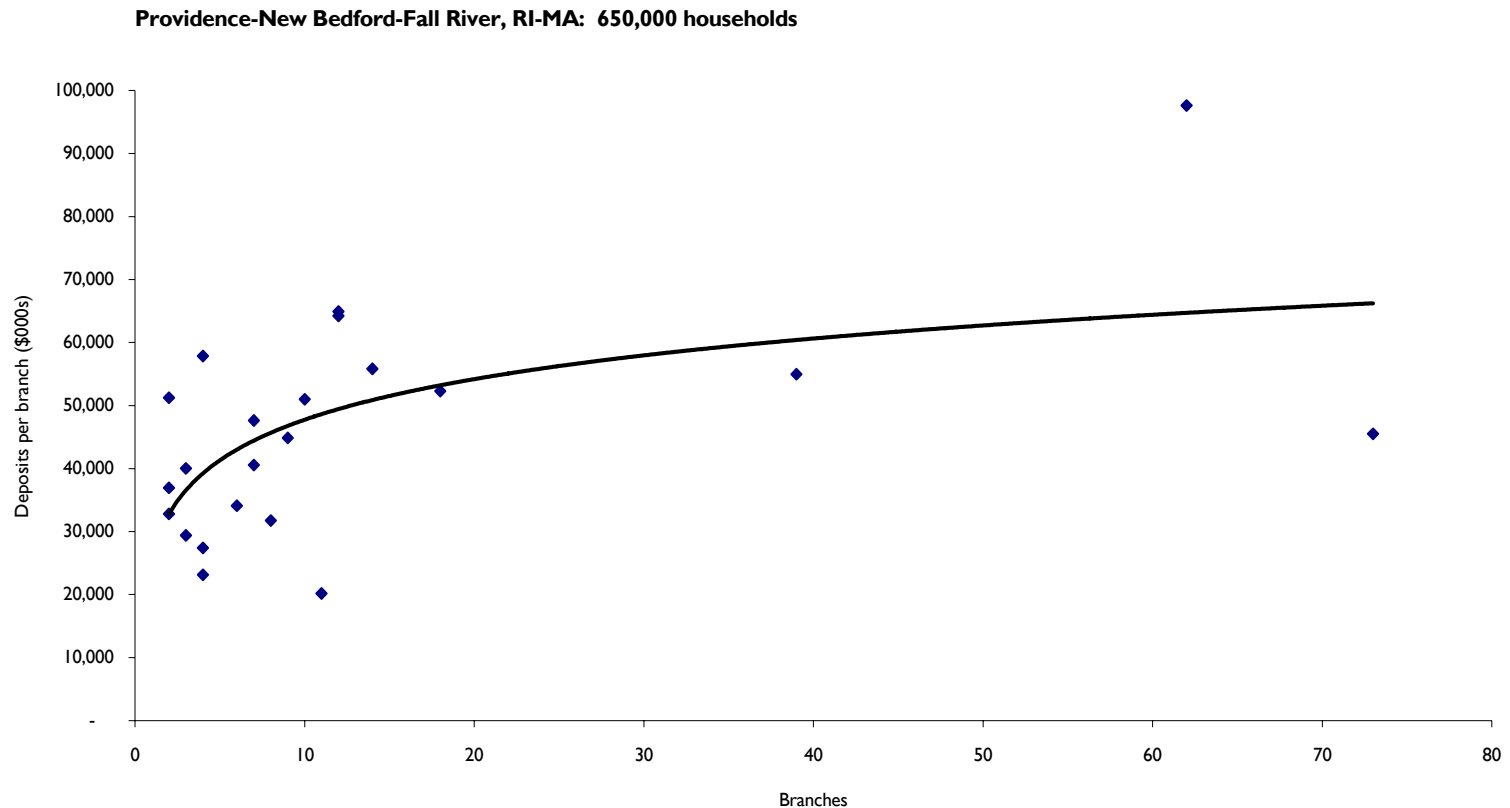
Due to this network effect, small networks usually gain less than their fair share of deposits; an institution with 5% of the branches may capture only 3% of the balances, while an institution with 10% of the branches may capture 12% of the balances.



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► *The network effect*

Illustrated another way, the network effect is manifested by the ability of large branch networks to attract greater deposits *per branch* than smaller networks.



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▶ *Recommend service model*

Specify appropriate service model (branch, inline, in-store, drive-in only) along with corresponding staff levels, by position type.

- ▶ Service model is selected as the smallest floor plan that can be 'wrapped around' the branch's projected demand.
- ▶ By deploying the minimum capital cost and non-interest expense against each submarket's projected demand, the bank reduces the required balances for profitable operation, and expands the list of potentially viable submarkets.

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▶ *Financial modeling*

Integrate the institution's own financial model with the demand projections to yield financial projections for each submarket.

- ▶ Keeps score in a manner consistent with the institution's approach to all capital projects, including same ranking measures (IRR, NPV, ROL, ROE...)
- ▶ Institution receives automated application to run financial projections for all submarkets. The application allows you to select any submarket and instantly view full financial projections using your own financial model.
- ▶ You can change any assumptions in the financial model and the model will recalculate for all submarkets and re-rank all submarkets.
- ▶ Facilitates testing of alternate assumptions of share, costs, rates, and number of branch opens.
- ▶ Displays qualifying / non-qualifying submarkets on a map, with zoom, print, and copy capabilities.

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▶ *Gap analysis*

Compare current distribution network to projected optimal network. Compare performance in existing markets to projected levels. Process identifies:

- ▶ Unserved high-balance submarkets targeted for branching.
- ▶ Underperformance: Latent potential in existing under-performing branches.
- ▶ Misalignment: Low balance branches in low potential submarkets to be considered for reconfiguration, closure, or divestiture.
- ▶ Overdelivery: submarkets with multiple branches serving the same trade area.

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▶ *Acquisition overlay*

Superimpose the network of each bank in each market against the clean slate network and calculate each institution's proportion of beneficial branches, where branches are categorized as:

- ▶ Beneficial if the target institution's branch occupies a qualifying submarket, and thus brings the bank to a location it would have wished to pursue for branching on its own.
- ▶ Beneficial if the target institution's branch occupies a submarket the bank already serves, thus offering the opportunity for expense reduction by consolidation.
- ▶ Non-beneficial if the target institution's branch occupies an unserved, and low balance potential submarket.

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▶ *Acquisition overlay*

The same performance versus potential calculations that are applied to the institution's own branch network can also be applied to the network of acquisition targets, to estimate:

- ▶ The additional deposit balances available from bringing underperforming branches up to market potential levels.
- ▶ Branches with limited growth potential due to market constraints.
- ▶ The 'lift' available to the combined network as a function of the resulting combined bank's new position on the market-to-outlet share curve.

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▶ *Data sources*

- ▶ Demographics, from EASI Demographics, June 2015
- ▶ Competitor statistics from FDIC and NCUA, June 2014
- ▶ Institution internal MCIF data

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Project timeline

Prior to start	Initial data request
Week 1 - 2	Kickoff meeting Develop guiding principles Submarket identification and profiles
Week 3 - 5	Submarket demographic and competitive profiles Confirm trade area definitions, including on-site visits Current network profitability
Week 6 - 8	Build demand model Penetration scenarios and financial modeling
Week 9 - 10	Gap analysis Final rankings and recommendations Build interactive database

About Bancography

Bancography provides consulting services and software tools to financial institutions in support of their branch, research, product and brand positioning strategies. For the branch network, Bancography offers custom network optimization services in addition to *Bancography Plan*, our market analysis and branch planning software tool.

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Appendix

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▶ *Submarket definition process*

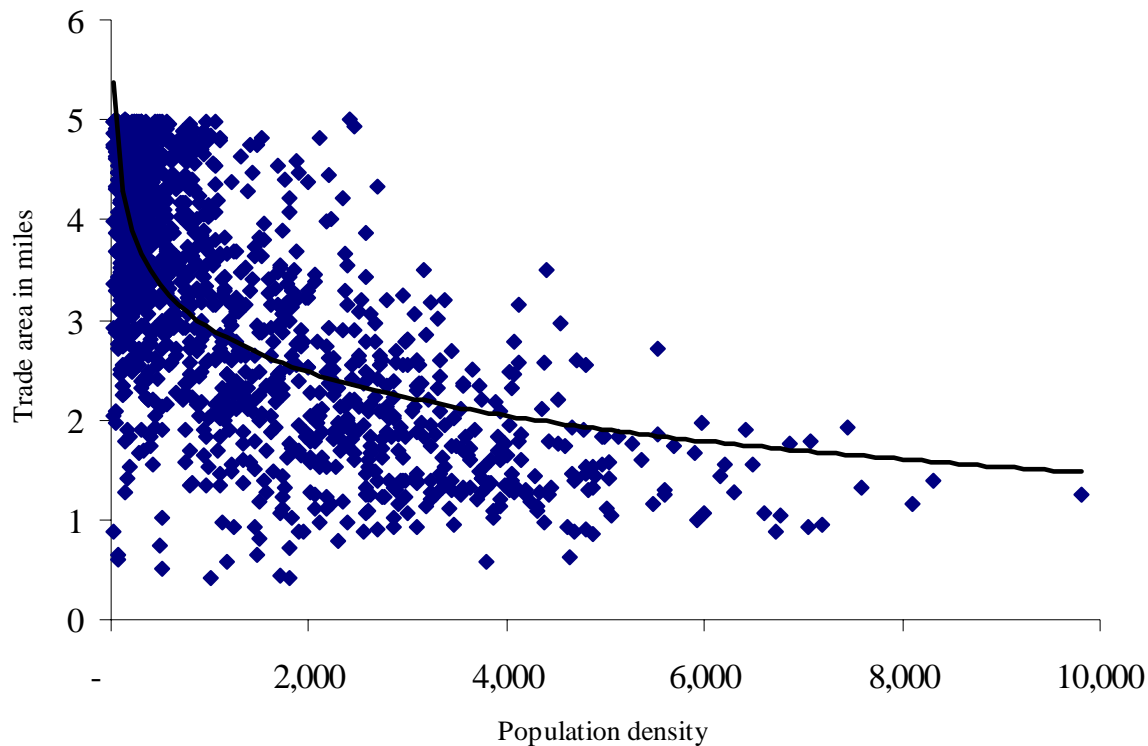
Plot competing branches and define submarkets for review. Submarkets may include concentrations of financial institution deposits, retailers, new residential growth, or commercial establishments. Produce demographic and competitive profiles of each submarket. Conduct on-site visits to verify boundaries of trade area.

- ▶ Starting list of potential submarket centers includes all existing financial institution branches and grocery stores.
- ▶ Project drawing area of any potential submarket center as an inverse function of population density (illustration follows).
- ▶ Combine potential submarket centers that have overlapping trade areas; eliminate any area that does not contain three or more branches or total deposits of at least \$60M.
- ▶ For areas that do not meet the preceding criteria, add those with projected five year household growth greater than 10%
- ▶ Assign all block groups to the nearest submarket center the block.

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► *Submarket definition process*

This chart shows population density for the immediate 1 mile radius around the submarket center, measured in population per square mile against trade area, defined as the distance from the household in the 66th percentile (arranged by distance from branch) to the branch of account.



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▶ *Demand estimate process*

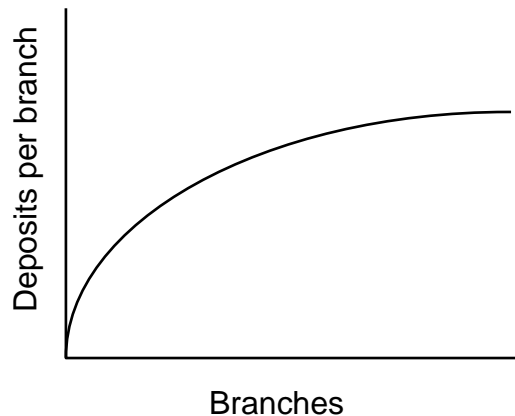
- ▶ Segment driven model.
- ▶ Consumer segments defined by age, income, length of residence, presence of children, and homeownership status.
- ▶ Business segments defined by sales volume and primary SIC code.
- ▶ Each segment has a use factor for each product, derived from Federal Reserve and primary research sources.
- ▶ For each product, demand equals the summation of the household (or business count) x the use factor across all 70 segments (consumer) / 72 segments (business).
- ▶ Summations are performed for each product at the block group level, then aggregated to the submarket level.

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► *Estimating market penetration*

In markets of all sizes, larger institutions capture a disproportionate share of balances – for example, an eight branch network will gain *more than twice as much* as a four branch network.

Larger networks outperform smaller ones even on a per branch basis, as illustrated below. This relationship holds in markets of all sizes as convenience-seeking consumers gravitate to perceived ubiquitous networks.



The network effect phenomenon holds true not only in MSAs and counties, but even in individual corridors, and thus argues in favor of a concentrated branching strategy across specific corridors that offer multiple profitable opportunities. These corridors can certainly include single line of business branches.

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▶ *Estimating market penetration*

Market penetration: Stable households

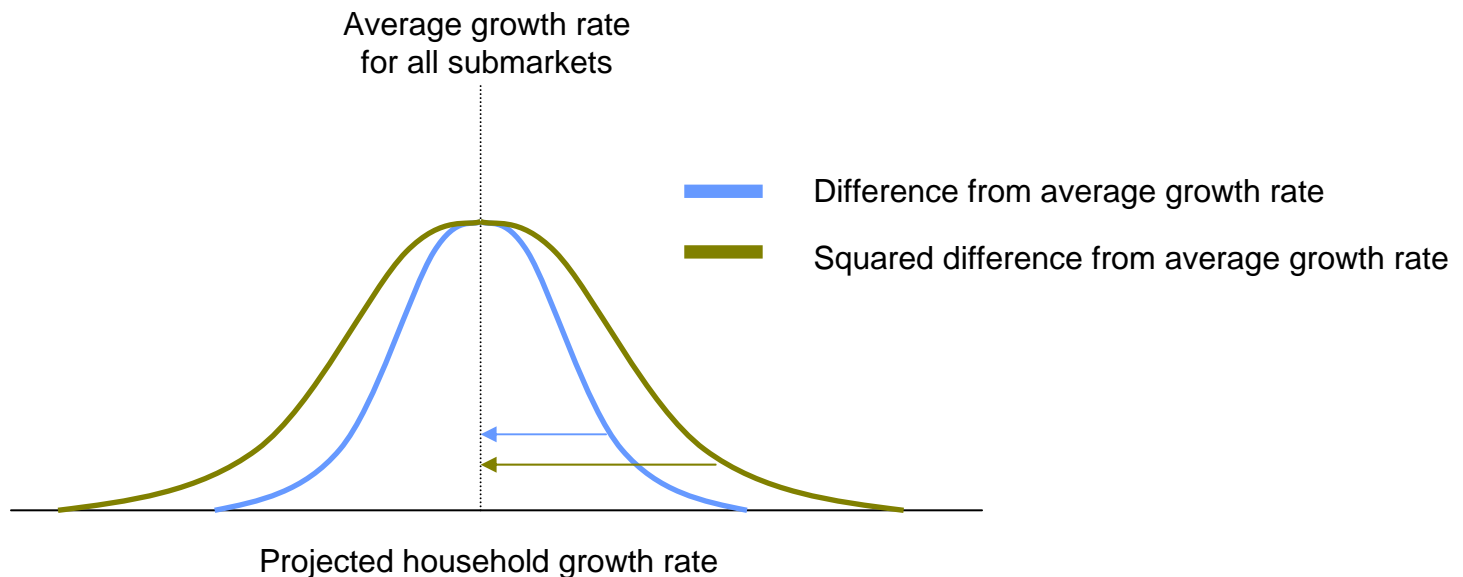
- ▶ Penetration is a logarithmic function of outlet share, so that higher outlet share markets face disproportionately higher share targets for stable households. The resulting share target is measured against a second target calculated based on the number of competitors in the market overall; and the number of marketwide competitors, defined as those operating in at least 35% of the market's submarkets. This insures a modest target for stable households even in low outlet share markets. The target share is capped at 25% in all markets.

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▶ *Estimating market penetration*

Market penetration: Stable households

- ▶ Scale base penetration by the square of the percentage difference between the submarket's growth rate and the average growth rate of all submarkets.
- ▶ This acknowledges that even stable households are more likely to switch institutions in a growing submarket.



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▶ *Estimating market penetration*

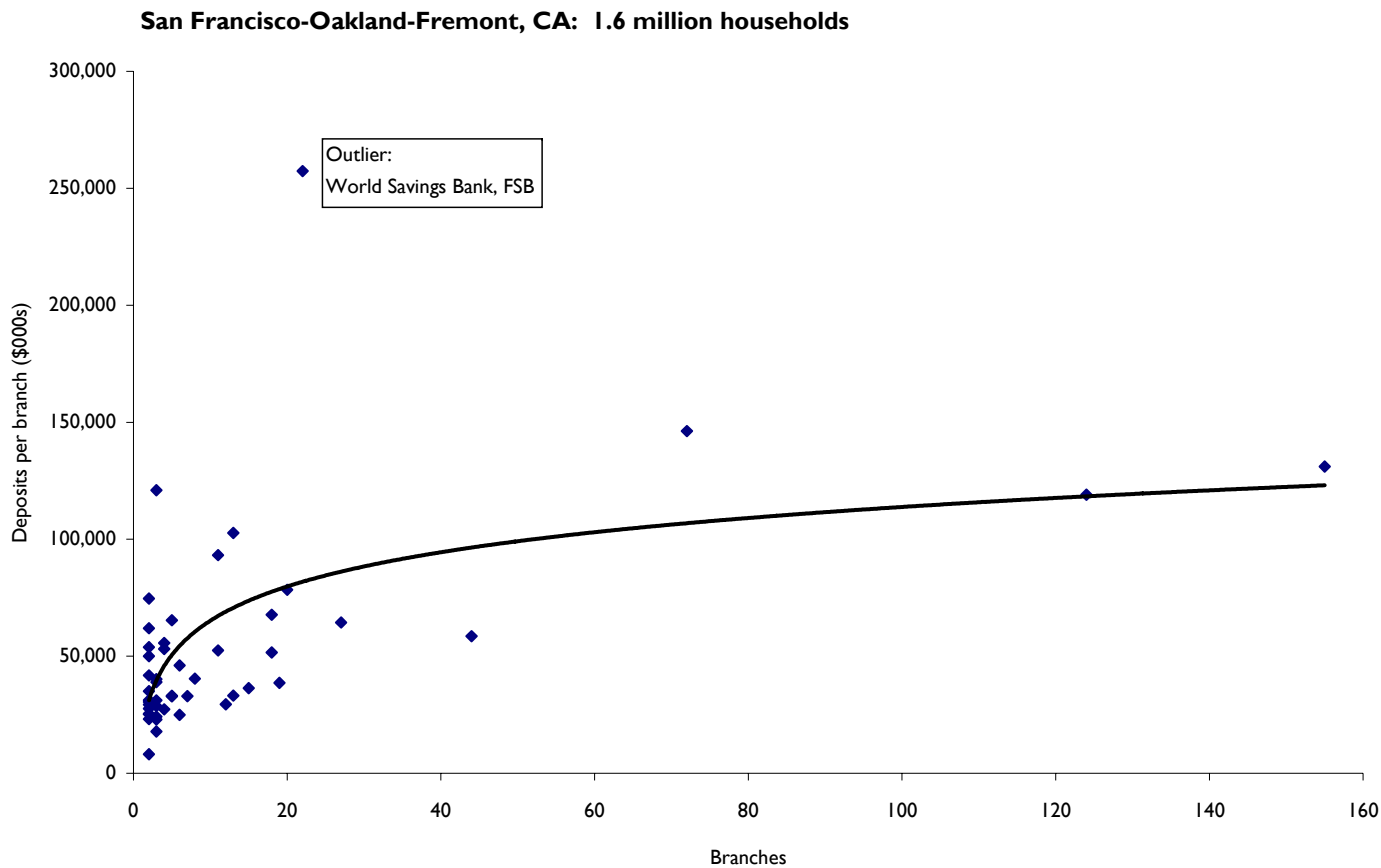
Market penetration, Growth / turnover households

- ▶ Scale in play balances by number of competitors in submarket.
- ▶ Multiple branches of the same bank count as multiple competitors.
- ▶ Scalar = $(1 / (1 + \text{Competitors}))$.
- ▶ Maximum penetration = 25%; minimum penetration = 8.3%.

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► *Estimating market penetration*

A second example of the network effect, in a large market area. Note the outlier.





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