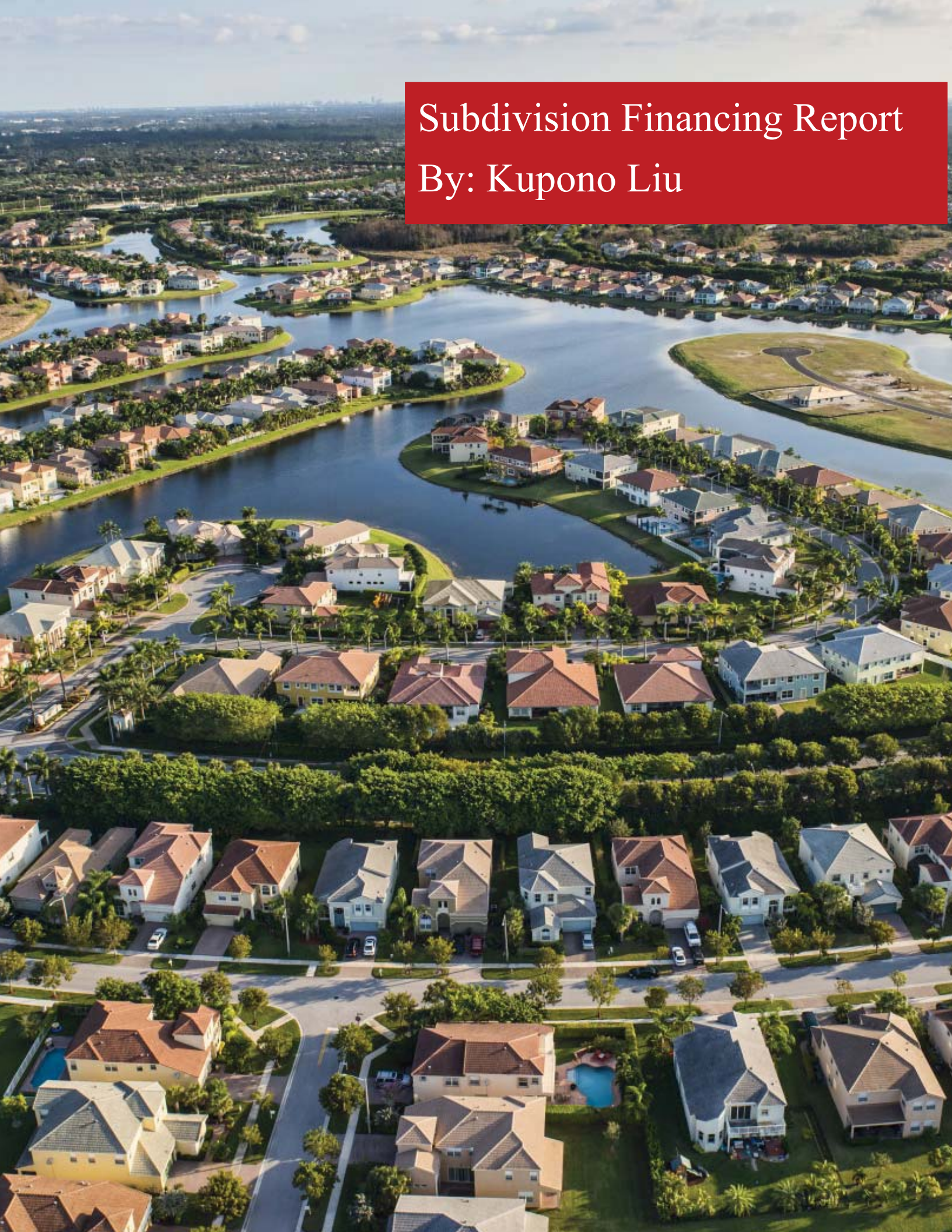


An aerial photograph of a suburban residential subdivision. A winding waterway, possibly a canal or lake, flows through the center of the development, surrounded by numerous houses with varying roof colors (red, grey, white). The houses are mostly two-story structures with gabled roofs. The area is lush with greenery, including palm trees and other tropical plants. In the background, a city skyline is visible under a clear sky. A red banner is overlaid on the top right corner of the image, containing the title and author information.

Subdivision Financing Report

By: Kuponu Liu

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5. Back of the Envelope (aka Quick and Dirty) Analysis

The developer's expected profit is \$978,106. The developer's profit as a percentage of total expenditures is 25%, his profit as a percentage of total revenue is 20% and return on equity is 28.2% (Figure 5).

This current deal is consistent with the local market's profit margin on cost. This deal has a profit margin on cost of 25.0% which falls within both Turnbull's (expected profit margin of 25% to 30%) and the local developer's (expected profit margin of 15% to 25%) range of expected profit margins.

The IRR (36.8%) is greater than profit margin on cost and return on equity due to their differences in calculation. The profit margin on cost and return on equity were calculated using the quick and dirty analysis¹. This analysis doesn't factor in the dimension of time. It combines all the projected revenue and expenditures accumulated over the project's life into a single summary period.

The IRR was calculated using a multiperiod DCF analysis and factors in the dimension of time (the project's term life). Instead of paying all the cash outflows at the onset (single period), the developer is spreading out his expenses over the project's term (multiple periods). The developer's investments (cash outflows) are discounted using the time value of money under the internal rate of return calculations; in other words, the denominator's (investment) present value is lower than the quick and dirty method's gross accumulation of cash outflows. Thus, the developer's IRR is higher than the profit margin on cost and return on equity.

¹ Peiser, R. B., & Hamilton, D. (2012). Lnd Development. In *Professional Real Estate Development: The ULI Guide to the Business* (3rd ed., pp. 99-100). Washington DC: Urban Land Institute.

Figure 5: Quick and Dirty Analysis

Quick and Dirty Analysis:		Total
Income from Lot Sales	Assumptions	
Number of Lots		79
* Price per Lot		\$61,912
Gross Lot Income		\$4,891,048
Land Costs		
Purchase Price for Land (79 lots)		\$890,000
Soft Costs		
Legal Fees (Land Acquisition)		
Appraisal Fees		
Engineering Fees		
Legal Fees (Development)		
Property Taxes		
Total Soft Costs		\$553,000
Hard Costs		
Building & Demolition		
Site Clearing & Grading		
Storm & Sanitary Sewer		
Water Works		
Underground Hydro & Telephone		
Siltation Control		
Boulevard & Landscaping		
Roads & Sidewalks		
Power		
Tree Planting		
Cul-de-sac		
Fire suppression tanks		
Total Hard Costs		\$2,212,000

Figure 5 Continued (Quick and Dirty Analysis)

Sale/Holding Costs		
Sales Commissions	3.00%	\$146,731
Management & Overhead	1.00%	\$48,910
Sale/Holding Costs		\$195,642
Interest Calculation		
Purchase Price for Land (79 lots)		\$890,000
* Loan to Value Ratio		50%
Loan Amount		\$445,000
* 50%		50%
Average Loan Balance		\$222,500
* Interest Rate		8%
* Project Life (years)		3
Estimated Construction Interest Expense		\$53,400
Loan Amount		\$445,000
* Points (Financing Fee)		2%
Financing Fee		\$8,900
Recap		
Land Cost		\$890,000
+ Soft Costs (Total)		\$553,000
+ Hard Costs (Total)		\$2,212,000
+ Sale/Holding Costs		\$195,642
+ Construction Interest Expense		\$53,400
+ Financing Fee		\$8,900
Total Expenditures (Total Project Cost)		\$3,912,942
- Loan Amount		\$445,000
Equity Invested		\$3,467,942
Profit		\$978,106
Profit as a % of Total Expenditures		25.0%
Profit as a % of Total Revenue		20.0%
Return on Equity		28.2%