Case prepared for
Mr. Dino Brangelino
CEO MovieMarketingMoneyMaker

by Frederik Durant
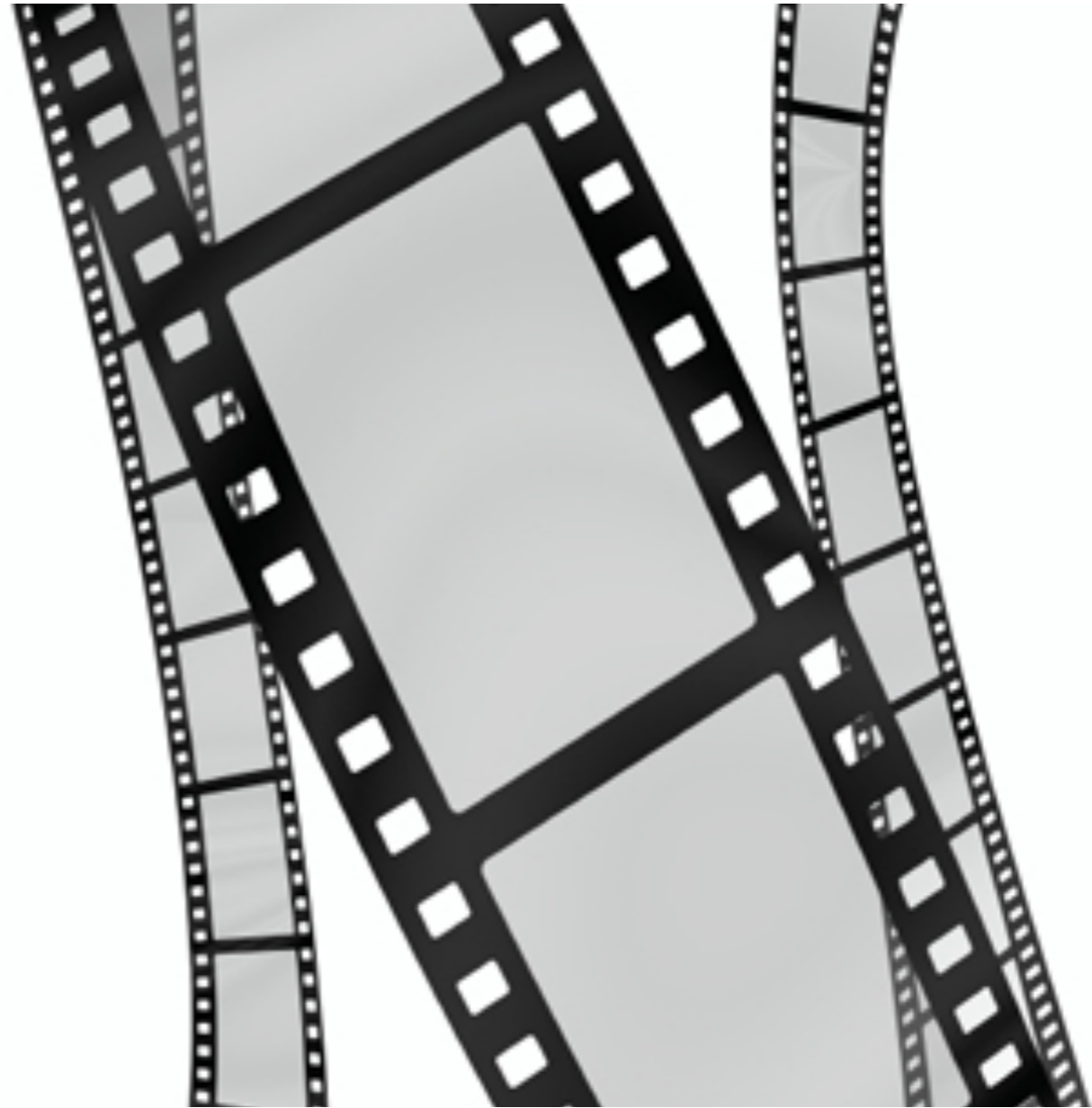.data consulting

New York City
January 30, 2015

●data   connecting the dots between data and value

Customer Request

- Better understand:

  - **profit drivers** of movie investments

  - Ideal **investment time** (pre or post launch)

- Given customer profile:
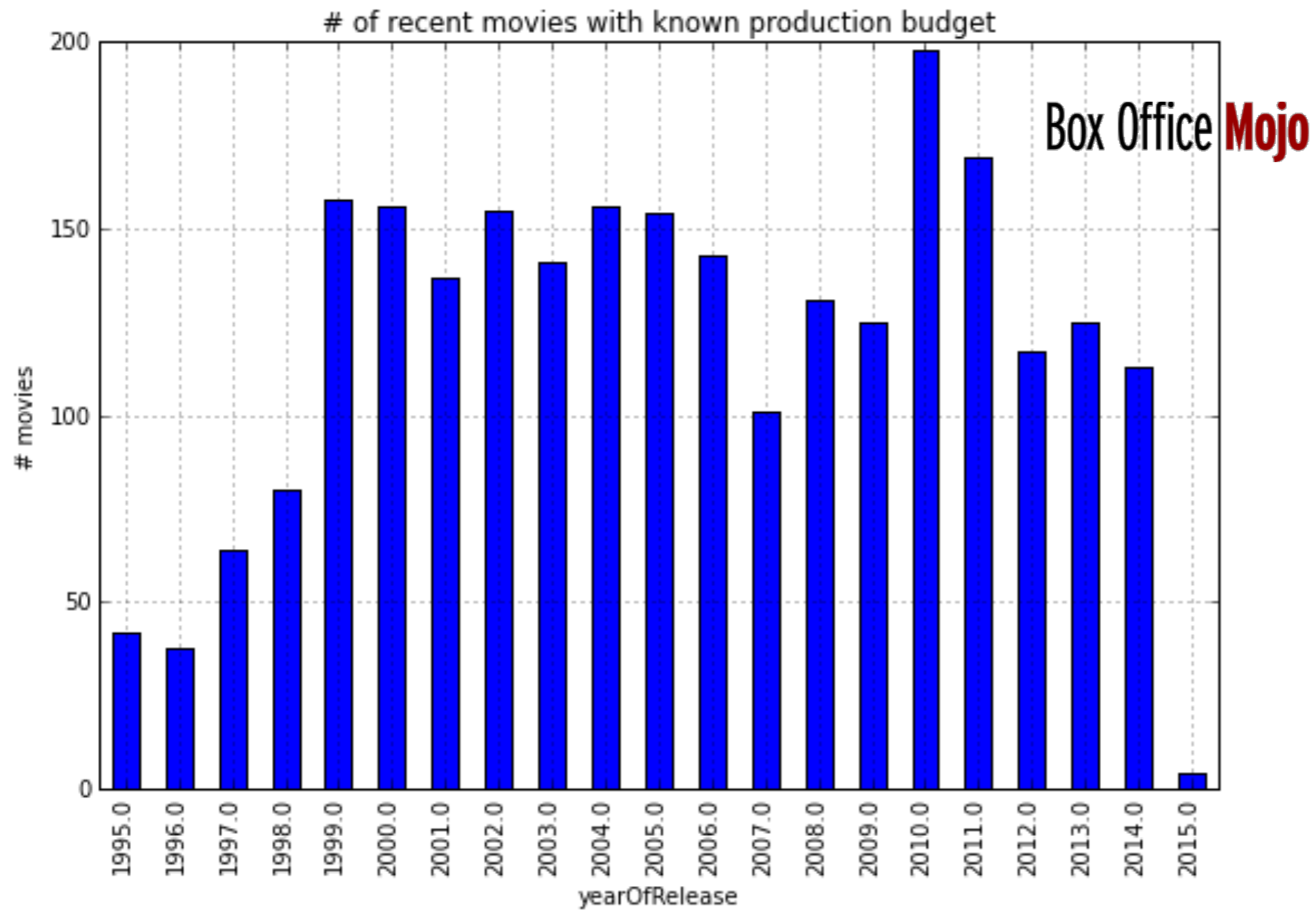
  - Risk averse

  - Late investor

Key insights & deliverables

- **Production budget** is a necessary but insufficient profit driver

- Knowledge of **opening weekend revenue (average per theater)** reduces model error by up to 15%

- Prediction models are available for calculating **domestic gross revenue** and **profitability**

# of recent movies with known production budget

	# instances	origin
Training	1985	1995 - 2011
Test	321	2012 - 2015

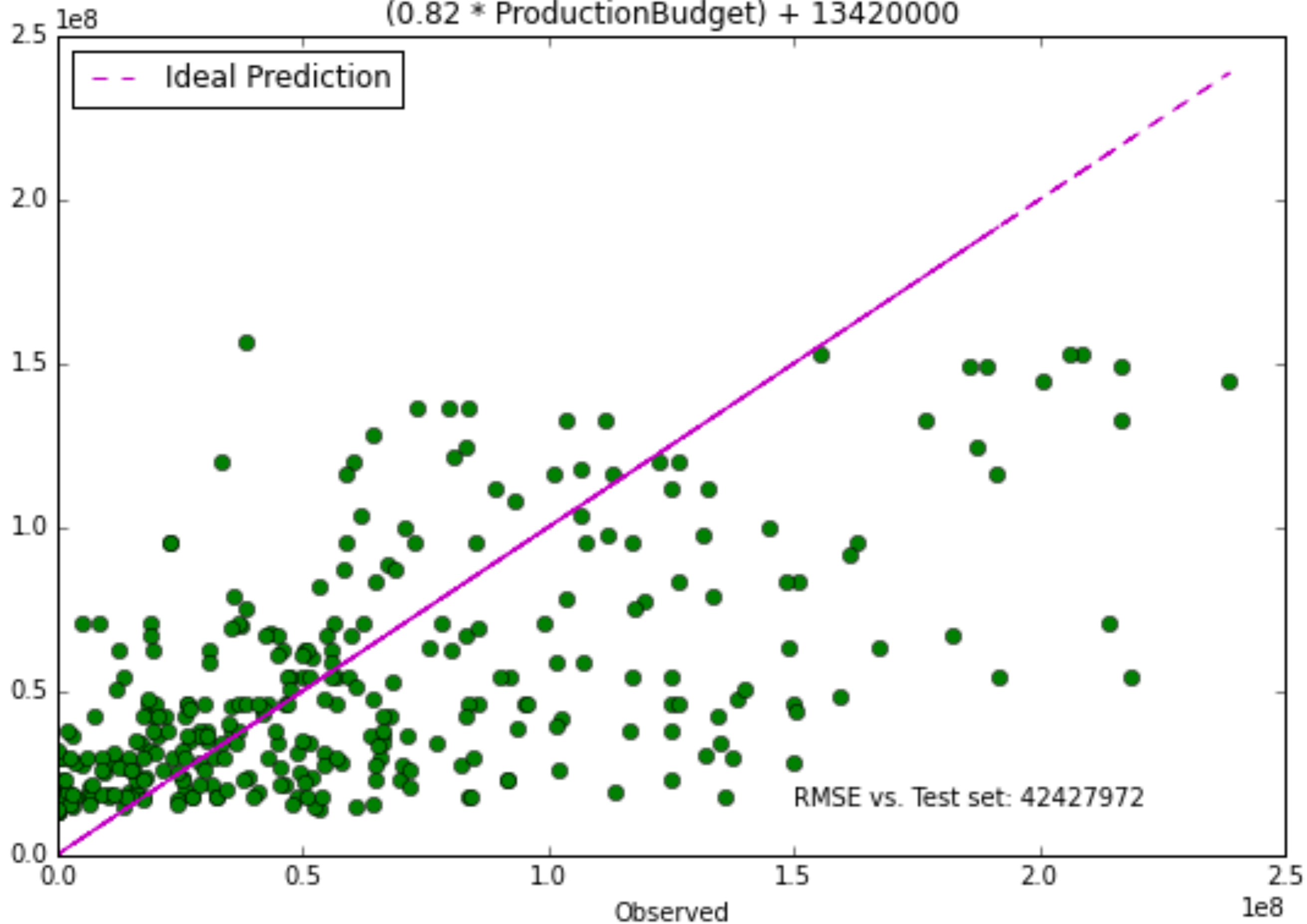data connecting the dots between data and value

BASELINE MODEL PERFORMANCE ON TEST SET
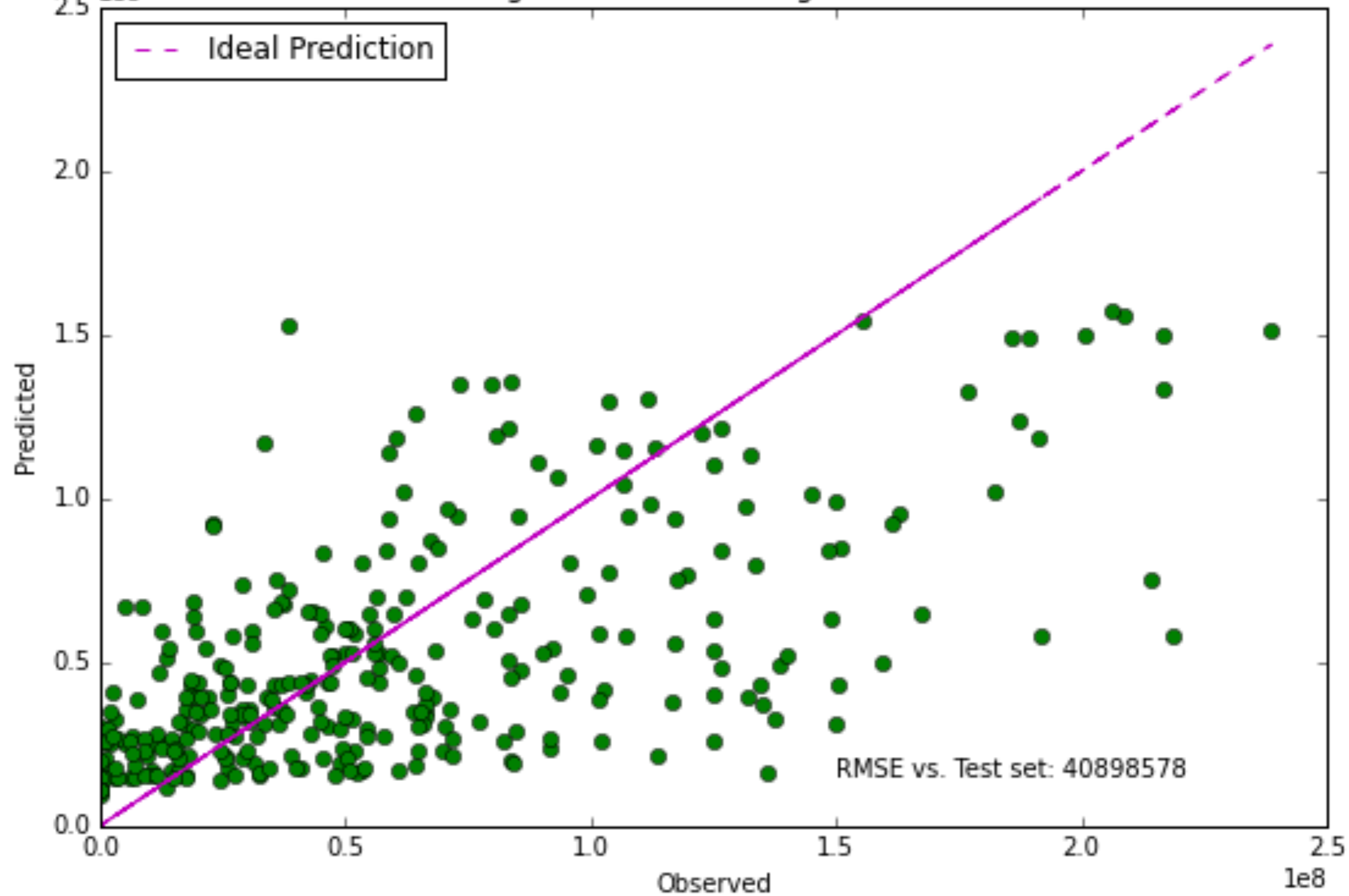DomesticTotalGross =
(0.82 * ProductionBudget) + 13420000

RMSE vs. Test set: 42427972

IMPROVED MODEL PERFORMANCE ON TEST SET
DomesticTotalGross =
(0.81 * ProductionBudget) + (464 * OWAvgGrossPerTheater) + 9604000

RMSE vs. Test set: 40898578

BEST MODEL PERFORMANCE ON TEST SET
DomesticTotalGross =
(0.74 * ProductionBudget) + (19390000 * log(OWAvgGrossPerTheater)) - 151500000

RMSE vs. Test set: 36388266
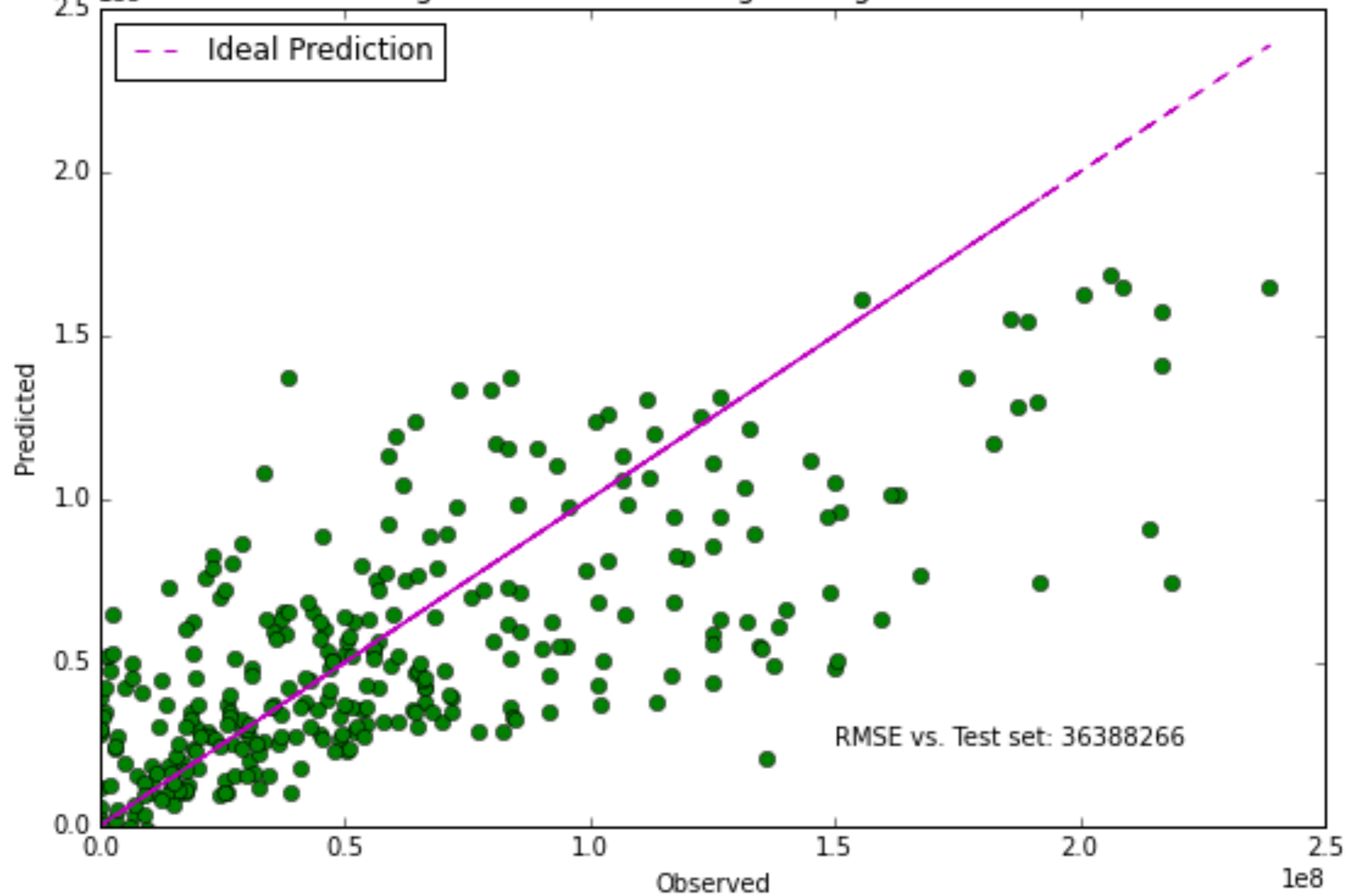
Model performance

Gross revenue prediction model	Root mean square error vs. test set	Rel. error reduction (baseline = 100)
Baseline	$42.4 M	100
Improved	$40.9 M	96.4
Best	$36.4 M	85.8

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Profitability ratio:
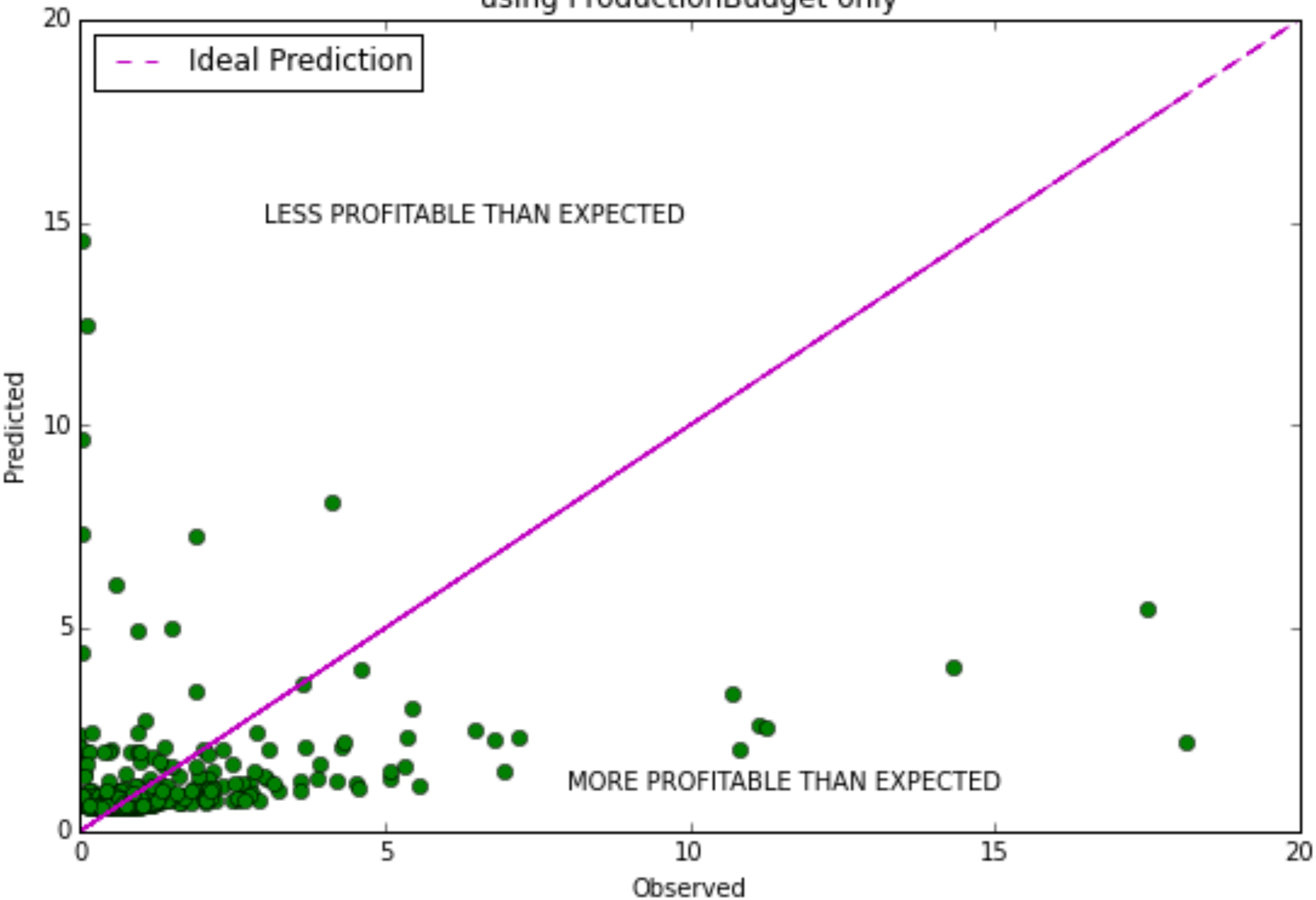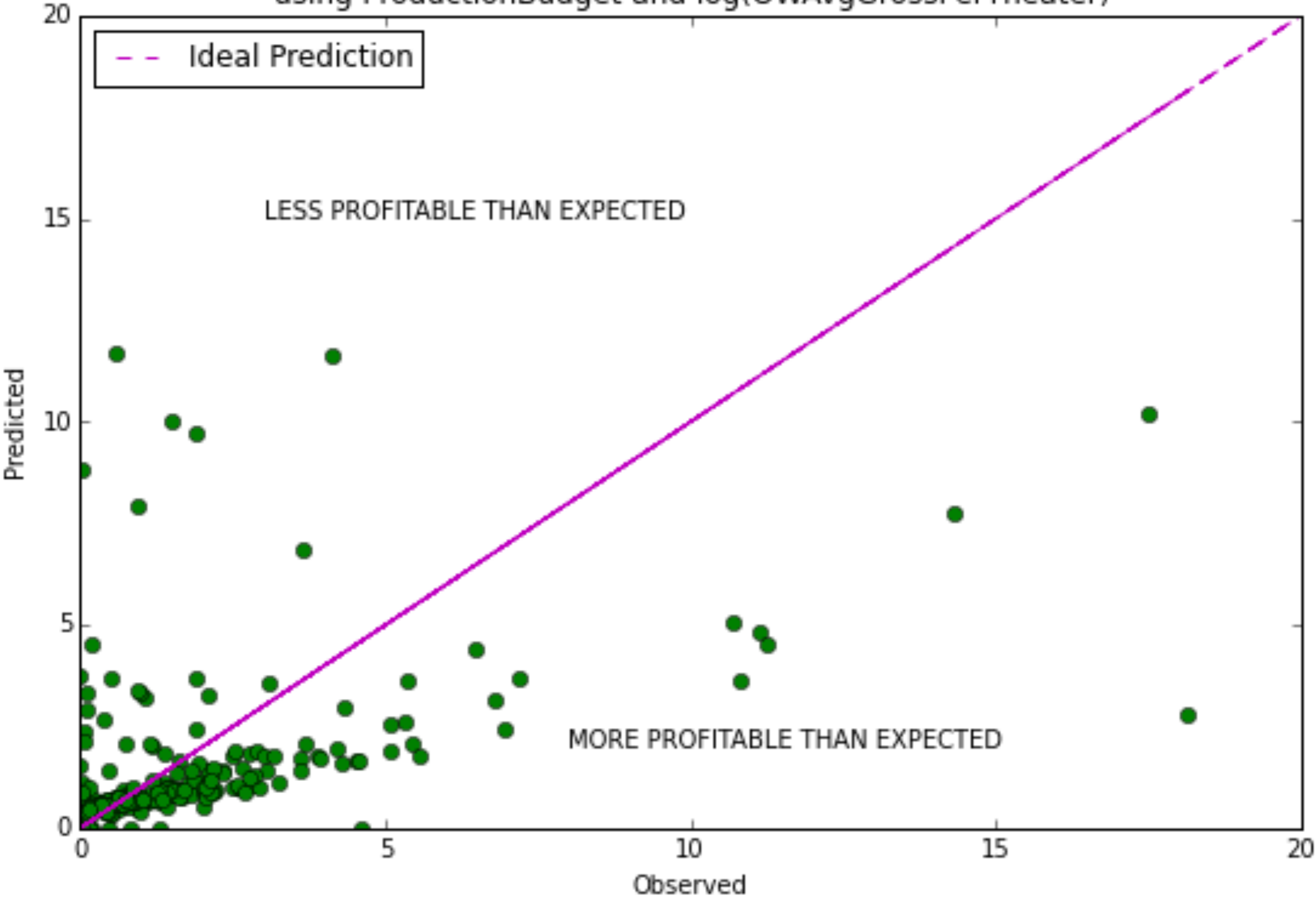
Domestic Gross Revenue / (Production Budget * 1.5)

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Profitability ratio prediction: BASELINE MODEL
using ProductionBudget only

LESS PROFITABLE THAN EXPECTED

MORE PROFITABLE THAN EXPECTED

- - Ideal Prediction

Predicted

Observed

Profitability ratio prediction: BEST MODEL
using ProductionBudget and log(OWAvgGrossPerTheater)

LESS PROFITABLE THAN EXPECTED

MORE PROFITABLE THAN EXPECTED

- - - Ideal Prediction

Predicted

Observed

Thank you!