
Contents

Acknowledgments	xv
Foreword	xvii
Introduction	xxi

Part 1: Static Monetary Macroeconomics

1 Classical Macroeconomic Theory	3
1.1 The Complete Classical Model	4
1.2 The Classical Dichotomy	7
1.3 The Classical AD-AS Model	8
1.4 The Neutrality of Money	10
1.5 Conclusion	11
2 Keynesian Macroeconomic Theory	13
2.1 The Keynesian Consumption Function	14
2.2 The Complete Keynesian Model	14
2.3 The Keynesian-Cross Model	16
2.4 The IS-LM Model	17
2.5 The Keynesian AD-AS Model	21
2.6 Conclusion	23

Part 2: Dynamic Monetary Macroeconomics

3	Models with Rational Expectations	27
3.1	The Cagan Model	28
3.2	Adaptive Expectations	29
3.2.1	Application to the Cagan Model	29
3.3	Rational Expectations	30
3.3.1	Application to the Cagan Model	31
3.4	The Lucas Critique	33
3.5	Rules versus Discretion	38
3.5.1	Rules	39
3.5.2	Discretion	40
3.6	Time Inconsistency	40
3.7	Inflation Mitigation	42
3.8	Conclusion	42
4	Neoclassical Growth Theory	45
4.1	The Solow Model	45
4.1.1	Steady State ($\nu = \tau = 0$)	47
4.1.2	Steady State Growth ($\nu \neq 0$ and $\tau = 0$)	49
4.1.3	Steady State per Capita Growth ($\nu \neq 0$ and $\tau \neq 0$)	50
4.2	The Optimal Growth Model	50
4.2.1	The Method of Lagrange Multipliers	52
4.2.2	The Method of Dynamic Programming	53
4.2.3	The Euler Equation	55
4.2.4	The Modified Golden Rule	55
4.3	The Overlapping Generations Model	55
4.4	Conclusion	60
5	Monetary Growth Theory	63
5.1	The Tobin Model	64
5.2	The Sidrauski Model	68
5.3	A Variation of the Sidrauski Model	70
5.4	The New Empirics of Monetary Growth	72
5.5	Conclusion	73
6	The Welfare Cost of Inflation	75
6.1	The Money Demand Function	75
6.2	The Consumer Surplus Approach	76
6.3	The Compensating Variation Approach	78
6.4	Empirical Evidence	82
6.5	Conclusion	84

Part 3: Theoretical Approaches to the Demand for Money

7	The Classics, Keynes, and Friedman	89
7.1	The Equation of Exchange	90
7.2	The Quantity Theory of Money	90
7.3	The Quantity Theory Demand for Money	91
7.4	The Cambridge Cash Balance Equation	92
7.5	The Keynesian Approach	93
7.6	Friedman's Modern Quantity Theory	96
7.7	Conclusion	99
8	Transactions Theories of Money Demand	101
8.1	The Baumol-Tobin Model	101
8.2	The Shopping-Time Model	104
8.3	Cash-in-Advance Models	107
8.4	Conclusion	111
9	Portfolio Theories of Money Demand	113
9.1	Tobin's Theory of Liquidity Preference	113
9.2	Money and Overlapping Generations	116
9.3	Conclusion	120

Part 4: Empirical Approaches to the Demand for Money

10	Conventional Demand for Money Functions	125
10.1	The Basic Specification	126
10.1.1	Definition of Money	126
10.1.2	Scale Variables	128
10.1.3	Opportunity Costs	131
10.2	The Long-Run Function	131
10.3	Money Demand Dynamics	134
10.4	First-Difference Specifications	136
10.5	Conclusion	138
11	Modeling Trends in the Variables of the Money Demand Function	139
11.1	Deterministic and Stochastic Trends	140
11.2	Testing for Unit Roots	142
11.2.1	Dickey-Fuller (DF) Tests	142
11.2.2	Augmented Dickey-Fuller (ADF) Tests	143
11.2.3	Breaking Trend Functions	145

11.3	Testing for Stationarity	146
11.4	Fractional Integration	147
11.5	Testing for Nonlinearity and Chaos	148
11.6	Detecting Signatures of Self-Organization	154
11.7	Conclusion	156
12	Cointegration and the Aggregate Demand for Money Function	157
12.1	Cointegration	158
12.2	Cointegration and Common Trends	158
12.3	Cointegration and Common Cycles	160
12.4	Cointegration and Codependent Cycles	161
12.5	Cointegration and Error Correction	162
12.6	Cointegration and Money Demand	163
12.7	Testing for Cointegration	165
12.7.1	The Engle-Granger Approach	165
12.7.2	The Johansen ML Approach	167
12.8	A Bounds Testing Approach	170
12.9	Conclusion	173
13	Balanced Growth, the Demand for Money, and Monetary Aggregation	175
13.1	Theoretical Background	176
13.2	Univariate Tests for Unit Roots	177
13.3	Testing the c, i, y System	178
13.4	Testing the $m - p, y, R$ System	180
13.5	Testing the $c, i, m - p, y, R$ System	181
13.6	Conclusion	181
14	Cross-Country Evidence on the Demand for Money ..	185
14.1	Cross-Country Data	186
14.2	Cross-Country Specifications	186
14.3	Cross-Country Evidence	190
14.4	Robustness	195
14.5	Conclusion	196

Part 5: Microfoundations and Monetary Aggregation

15 The Microeconomic Foundations of the Definition of Money	199
15.1 The Simple-Sum Index	200
15.2 The User Cost of Money	201
15.3 Microeconomic Foundations	203
15.4 Aggregation Theory	205
15.5 Index Number Theory	207
15.6 Diewert's Link	209
15.7 Conclusion	211
16 The New Monetary Aggregates	213
16.1 The Neoclassical Monetary Problem	214
16.2 Understanding the Divisia Aggregates	215
16.3 Divisia Second Moments	217
16.4 Measurement Matters	218
16.5 The MQ and CE Indexes	219
16.6 Empirical Comparisons	221
16.7 Conclusion	230
17 Nominal Stylized Facts	231
17.1 The Hodrick and Prescott Filter	232
17.2 The Cyclical Behavior of Money	233
17.3 Prices, Interest Rates, and Velocity	236
17.4 Robustness	240
17.4.1 The Baxter and King Filter	240
17.4.2 The Christiano and Fitzerland Filter	241
17.5 Conclusion	242

Part 6: Microfoundations and the Demand for Money

18 The Nonparametric Approach to Demand Analysis	245
18.1 The Idea of Revealed Preference	246
18.2 The Maximization Hypothesis	247
18.3 Homotheticity	247
18.4 Direct Separability	248
18.5 Indirect Separability	251
18.6 Homothetic Separability	253
18.7 NONPAR Tests of Consumer Behavior	254
18.8 Conclusion	255

19 The Parametric Approach to the Demand for Monetary Assets	257
19.1 The Direct Utility Approach	257
19.2 The Indirect Utility Approach	259
19.3 The Slutsky Conditions	262
19.3.1 Homogeneity (of Degree Zero)	262
19.3.2 Adding-Up (Summability)	264
19.3.3 Symmetry of the Slutsky Matrix	265
19.3.4 Negativity of the Own Substitution Effect	267
19.4 Conclusion	268
20 Locally Flexible Functional Forms and Demand Systems	269
20.1 Locally Flexible Forms	270
20.1.1 The Generalized Leontief	270
20.1.2 The Basic Translog	271
20.1.3 The Almost Ideal Demand System	272
20.2 Effectively Globally Regular Forms	273
20.2.1 The Minflex Laurent	273
20.2.2 The NQ Reciprocal Indirect Utility Function	275
20.3 Imposing Local Curvature	276
20.3.1 The Generalized Leontief and Local Curvature	277
20.3.2 The Basic Translog and Local Curvature	279
20.3.3 The Almost Ideal Demand System and Local Curvature	280
20.3.4 The Minflex Laurent and Local Curvature	281
20.3.5 The NQ Reciprocal Indirect Utility Function and Local Curvature	281
20.4 Conclusion	282
21 Globally Flexible Functional Forms and Demand Systems	285
21.1 The Fourier Model	286
21.2 The AIM Model	288
21.2.1 The AIM(1) Model	289
21.2.2 The AIM(2) Model	290
21.2.3 The AIM(3) Model	292
21.3 Computational Considerations	294
21.4 Imposing Curvature Restrictions	295
21.5 Conclusion	297

Part 7: Microeconometrics and the Demand for Money

22 The Econometrics of Demand Systems	301
22.1 Dimension Reduction	302
22.2 Duality and Functional Structure.....	304
22.3 Stochastic Specification	305
22.4 Autoregressive Disturbances	307
22.5 Theoretical Regularity	309
22.6 Econometric Regularity	310
22.7 Expenditure and Price Elasticities	311
22.8 Elasticities of Substitution.....	311
22.9 Conclusion	313
23 Applied Monetary Demand Analysis	315
23.1 The Monetary Problem	316
23.2 The Basic Translog and the Demand for Money	317
23.2.1 Data and Econometric Issues.....	319
23.2.2 Empirical Evidence	319
23.2.3 Regularity Effects of Serial Correlation Correction	321
23.3 The AIM(2) Model and the Demand for Money	322
23.3.1 AIM(2) Income and Price Elasticities	324
23.3.2 AIM(2) Elasticities of Substitution.....	325
23.4 Conclusion	329
24 Future Research Agenda	331
24.1 Outstanding Credit.....	332
24.2 Monetary Policy	332
24.3 Dynamics	332
24.4 Risk Matters	335
24.5 Conclusion	340
References	341
Author Index	367
Subject Index	371



<http://www.springer.com/978-0-387-71726-5>

The Demand for Money
Theoretical and Empirical Approaches
Serletis, A.
2007, XXIV, 382 p., Hardcover
ISBN: 978-0-387-71726-5