Investing Cash: Opportunities in the Cash and Short Duration Markets in the New Normal

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I. Where Were We?
Where we were: a powerful combination for growth and markets

Financial Innovation
Globalization
De-Regulation
Where we were: children of the bull market

Paradigm Shift

Cumulative Return

SOURCE: Morningstar. As of December 31, 2009
Equities and commodities have tended to be volatile, involve risk to principal and, unlike bonds, do not offer a fixed rate of return. Commodities may not be suitable for all investors. Stocks is represented by the S&P 500; Bonds is represented by the Barclays Capital U.S. Aggregate Index; Commodities is represented by the S&P Goldman Sachs Commodity Total Return Index; CPI is represented by the CPIAUCNS Index.
A sudden stop: a crisis of the system

Lehman Collapse
- Greed
- Lax Lending Standards
- Vendor Financing
- Shadow Banks
- Excess Leverage
- Global Imbalances
- Ratings Abuse
- Securitization
- Easy Credit
- Asset Bubble
Outlook: a sustainable recovery?

- Optimistic Case
- Base Case

- 2008
- Synchronized Global Recession
- Now
- Stimulus Effect

?
Escape velocity?
Three “Boosters”

- Government stimulus
- Inventory Cycle
- Final Demand?
Phase II of Inventory Cycle in Early Stages

- Shown: Monthly % change in business inventories
- Phase I: Slower pace of liquidation
- Phase II: Accumulation of inventories in anticipation of rising demand

SOURCE: Census Bureau, Bloomberg
I. Where Are We Now?
# Defining the new normal

<table>
<thead>
<tr>
<th>Old Normal</th>
<th>New Normal</th>
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<tbody>
<tr>
<td>Government</td>
<td>Referee – Player</td>
</tr>
<tr>
<td>Banking</td>
<td>Utility Model</td>
</tr>
<tr>
<td>Consumer</td>
<td>Age of Thrift</td>
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**De-leveraging**

**De-globalization**

**Re-regulation**
What will the new normal look like?

- Economic recovery is underway, but growth unlikely to return to “Old Normal” levels
- Growth rates de-synchronized, differentiated by initial conditions and policy responses
- Inflation to remain low due to output gap (commodity/asset inflation possible)
- Potential for “fat tail” outcomes not insignificant

As of December 31, 2009
Key Secular Themes: Driving Without a Spare

2010 Summary: The world is on a multi-year journey to an unstable destination, through unfamiliar territory, on an uneven road, having already used its spare tire(s).

- De-synchronization in global growth outcomes
- Extended periods of increased sovereign risk
- And asset class performance
- Serial balance sheet contamination
- Politicians trump economists
- Expect policy mistakes

As of May 15, 2010
Unemployment Remains a Severe Headwind –
Government Policy Brought us Back from the Brink, but we are far from the Old Normal

Average Duration of Unemployment Exceeding 35 Weeks

SOURCE: Bureau of Labor Statistics
As of July 1, 2010
Initial Conditions Drive Disparate Growth Outcomes
Developing Countries Lead Global Growth

Industrial Production Levels

SOURCE: Haver Analytics, PIMCO
As of May 31, 2010
Sovereign Credit Risk: Risk Factor Du Jour

• Where are the risks?
  – The vertical axis of the chart plots a country’s overall deficit (or surplus in the case of Norway) as a percentage of GDP. Countries that fall below zero are spending more than they are taking in, meaning they will likely have to issue more debt to operate. The horizontal axis shows a country’s overall debt as a percentage of GDP. A higher debt to GDP ratio can slow economic growth. The countries in the red zone, or the “ring of fire” have public debt that exceeds 90% of GDP or have the potential to pass this threshold within a few years’ time (given their deficit). The countries in the yellow and green zones are potentially more solvent.

SOURCE: Reuters EcoWin (See PIMCO; Gross, Bill, “The Ring of Fire,” Investment Outlook, February 2009)
A wider range of inflationary outcomes

- Future inflation will potentially be more volatile
- Lower potential growth will likely result in higher inflation than that experienced during the "great moderation"

**Chart:**

- **Past:**
  - Peak inflation rate
- **Future:**
  - Lower peak inflation rate

**Annualized Inflation Rate**

**Source:** PIMCO

Example for illustrative purposes only.
The cyclically adjusted Price/Earnings ratios consist of monthly stock price, dividends, and earnings data from the S&P composite earnings, and has been multiplied using the CPI-U Index. The long-term interest rates are represented by the 10 year Treasuries.
## Risks & opportunities: the known unknowns

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<td>• Successful exit strategies: the hand off from temporary to sustainable growth drivers</td>
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<tr>
<td>• Balanced redistribution of wealth that does not undermine future growth</td>
</tr>
<tr>
<td>• Credible fiscal policies that limit public debt levels</td>
</tr>
<tr>
<td>• Key institutions can and will function outside short term political pressures</td>
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</table>
What did Investors learn?

There is no “Free Lunch” in cash – Know what you are buying

• Look at cash strategies differently
• Do not rely solely on Ratings – for individual securities or for funds
• Evaluate all cash managers as we would other Equity and Fixed Income Managers
• Evaluate cash strategies and determine their strategic importance
• Transparency and full disclosure are critical
II. Where Are We Going?
Cash Balances Under Increasing Focus

Strong profits in conjunction with major structural changes in money markets have resulted in cash balances at a 60-year high

Key Questions Investors are Asking

How to maintain liquidity without overpaying for it?

What is the optimal cash tiering structure?

What are the benefits and risks of moving out the maturity spectrum?
The impact on cash investing

• Yields are low and will likely remain there at least through 2011
• New Money Market Regulations will continue to keep yields compressed
• Focus on liquidity without overpaying for it – Segment it
• Look for opportunities to invest outside of money markets
Policy Response –
Money Market Fund Regulatory Reform

- Securities and Exchange Commission (SEC) Changes to 2A-7 Regulation
  - Decreased weighted average maturity (WAM) to 60 days from 90.
  - Implemented a Spread Weighted Average Life (WAL) of 120 day max
  - Mandated minimum liquidity requirements of 10% in overnight and 30% in weekly liquidity
  - Much more limited allowance of Tier 2 holdings; 3% max 0.5% per issuer and max 45 days maturity

- Moody’s Proposes a New Money Fund Ratings Methodology

- S&P Proposes new Counterparty restrictions on Rated Money Market Funds

- FASB and IASB Propose new Accounting Classifications that may impact Financial Statements
Size of Commercial Paper Market is Shrinking

- Commercial Paper issuance has fallen
- Debt maturities have been termed out

SOURCE: Federal Reserve, Bloomberg
Money Market Assets have Decreased

SOURCE: Bloomberg
Money Market Yields are On the Decline

Money Market 7-Day SEC Yields

Yields (bps)

Jan-07 Jan-08 Jan-09 Jan-10

SOURCE: Bloomberg
Issuance of Cash Securities is Enormous

As of September 30, 2010

Money Market Investable Assets (bns)

- CP Outstanding (lhs)
- Discos (lhs)
- T-Bills (lhs)
- Repos (rhs)

SOURCE: Bloomberg
Treasuries: U.S. Treasuries; Municipals: Sifma and mma rates; Agencies: Agency Discount Notes; CP: Commercial Paper
Opportunities Beyond Money Markets are Currently Attractive

As of September 30, 2010

Short Maturity Yields

Repos
CDs
Mone
Money Market Eligible

SOURCE: Bloomberg
Treasuries: U.S. Treasuries; Municipals: Sifma and mma rates; Agencies: Agency Discount Notes; CP: Commercial Paper
Conclusions

Where Are We Now?

• Perfect Liquidity is Expensive – There is no “free lunch” in cash
• All of the old assumptions about cash (Structure, Liquidity, etc.) were not true
• Stepping out of money markets will provide opportunities to enhance yield, but …
  – Risk Management is critical
  – Credit Analysis is key
  – Extensive Resources and Experience are important
Investing in the New Normal
Informatica Corporation
Informatica

The #1 independent leader in Data Integration

- 2009 Revenue: $501 million
- Q3 2010 Revenue: $161 million
- 5-year Average Growth Rate: 18% per year
- Customers: 4,200+
  - 84 of Fortune 100
  - 87%+ of Dow Jones
  - Government organizations in 20 countries
- Partners: 400+
  - Major SI, ISV, OEM and On-Demand Leaders
- Employees: 2,000+
- Offices in 30 Countries
Informatica Cash Portfolio

- Global Cash Balance is over $425mm
  - Majority of cash is in the United States
  - International cash balances dispersed

- Investment Objectives
  - Capital Preservation, Liquidity, Risk Diversification, Maximize Yields

- Investment Vehicles
  - Bank deposits
  - Money market funds
  - Separately managed accounts
  - Structured investments
Cash Portfolios

- **Strategic Cash (Long-Term Portfolio)**
  - Rely on Investment Managers
  - Do not trade investments in-house

- **Reserve Cash (Short-Term Portfolio)**
  - MMDA Accounts
  - Money Market Funds
  - Time Deposits
  - Negotiated Investments

- **Operating Cash (Domestic and International Bank Accounts)**
  - Demand Accounts
    - Earnings Credit
  - Time Deposits
  - Money Market Funds
Maximizing yield in the New Normal

- Commercial Paper
- Bank Deposits
- Earnings Credit
  - 30%

- Corporate Debt
- Financials
  - 20%

- Industrials

- Treasuries
- Agencies – Bullet and Callable
- Municipal Bonds
- TLGP
- Sovereigns
  - 50%

WAM – 12-15 Months
Duration – 9 to 12 Months
Optimal Duration in New Normal

- Increasing duration to maximize interest income should pay off under multiple scenarios

<table>
<thead>
<tr>
<th>Portfolio Duration</th>
<th>3-months</th>
<th>6-months</th>
<th>12-months</th>
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<tbody>
<tr>
<td>Current Yield</td>
<td>0.25%</td>
<td>0.40%</td>
<td>0.75%</td>
</tr>
<tr>
<td>12-month Yield</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rates stay flat</td>
<td>0.25%</td>
<td>0.40%</td>
<td>0.75%</td>
</tr>
<tr>
<td>Rates rise - 50bps in 6m, 25bps every 3m</td>
<td>0.47%</td>
<td>0.51%</td>
<td>0.75%</td>
</tr>
<tr>
<td>Rates rise - 50bps in 3m, 25bps every 3m</td>
<td>0.69%</td>
<td>0.56%</td>
<td>0.75%</td>
</tr>
</tbody>
</table>

- If liquidity need is high, extending duration will increase Mark-to-Market risk and possibly result in portfolio losses if securities are sold.
Credit Allocation

- Uncertainty in economy still exists
- Limit credit concentration to 5% of Fixed Income Portfolio and 10% with Bank Deposits
- Limit investments to Single A and above
  - Limits investment options to less than 50-100 names
    - Total Issuers less than 5,000
    - Double A and above – 100 / Single A and above – less than 500
  - Industrial and Utility yields are low given Demand and Supply
  - Financials
    - Extend duration on select financial institutions
    - Invest in Financial CP
    - Invest in MMDA accounts
    - Maintain total allocation to 30-40%
Duration and Credit Risk on Total Return

- JP Morgan prepared a study based on trailing 10-yr data on Total Returns varying duration and credit allocation
- A portfolio of 3-month and 6-month treasuries had negative total returns over a one-month period of less than 1% versus over 13% for a 1-year Treasury Portfolio
  - Total rate of return over the last 1, 3, 5, and 10 years was higher on the 1-year portfolio
  - Worst case loss of -0.30% over rolling 3-month periods
  - Other rolling periods always produced positive returns
- If you layer in a Credit component, Merrill Lynch 1-3 Yr Gov/Corp (A rated or above), the loss frequency increases to over 20% for a one-month period
  - Total rate of return higher than any Government portfolio
  - Possible negative loss of -1.15% over rolling 3-month, -0.31% over rolling 6-month, and -0.25% over rolling 1 year periods
    - On a $250M portfolio, the average 1-year loss is $625K
Investment Dilemma – is increasing yield by basis points worth the risk

• Increasing yield from 5bps to 15bps by investing in Prime Funds
• Increasing yield from 30bps to 100bps by investing in a lower rated bank - moral hazard
• Should we increase credit allocation above 50%
• Should we extend Duration and Weighted Average Maturity beyond 15 months

Financial measure – EBITDA or EPS
Negative carry from debt on books
Appendix

Past performance is not a guarantee or a reliable indicator of future results.

Statements concerning financial market trends are based on current market conditions, which will fluctuate. There is no guarantee that these investment strategies will work under all market conditions, and each investor should evaluate their ability to invest for the long-term, especially during periods of downturn in the market. Outlook and strategies are subject to change without notice.

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Index Description
Barclays Capital U.S. Aggregate Index represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis.

S&P Goldman Sachs Commodity Index Total Return (S&P GSCITR) is an unmanaged index composed of futures contracts on 25 physical commodities, designed to be a highly liquid and diversified benchmark for commodities as an asset class. The Total Return Index includes an implied T-Bill rate on the notional value of the futures contracts.

The S&P 500 Index is an unmanaged market index generally considered representative of the stock market as a whole. The index focuses on the Large-Cap segment of the U.S. equities market.

It is not possible to invest directly in an unmanaged index.