

C

A

C A M B R I D G E   A S S O C I A T E S   L L C

## U.S. MARKET COMMENT: TECH SPENDING

February 28, 2001

Ian Kennedy  
Robert Lang  
Stuart Wall  
Laura Brooks  
Leigh Pate

Copyright © 2001 by Cambridge Associates LLC. All rights reserved.

This report may not be displayed, reproduced, distributed, transmitted or used to create derivative works in any form, in whole or in portion, by any means, without written permission from Cambridge Associates LLC. Copying of this publication is a violation of federal copyright laws (17 U.S.C. 101 et seq.). Violators of this copyright may be subject to liability for substantial monetary damages. The information and material published in this report are confidential and non-transferable. This means that authorized members may not disclose any information or material derived from this report to third parties, or use information or material from this report, without the prior written authorization of Cambridge Associates LLC. An authorized member may disclose information or material from this report to its staff, trustees, or Investment Committee with the understanding that these individuals will treat it confidentially. Additionally, information from this report may be disclosed if disclosure is required by law or court order, but members are required to provide notice to Cambridge Associates LLC reasonably in advance of such disclosure. This report is provided for informational purposes only. It is not intended to constitute an offer of securities of any of the issuers that are described in the report. This report is provided only to persons that Cambridge Associates LLC believes to be "Accredited Investors" as that term is defined in Regulation D under the Securities Act of 1933. The recipient of this report may not provide it to any other person without the consent of Cambridge Associates LLC. Investors should completely review all Fund offering materials before considering an investment. No part of this report is intended as a recommendation of any firm or any security. Factual information contained herein about investment firms and their returns which has not been independently verified has generally been collected from the firms themselves through the mail. We can neither assure nor accept responsibility for accuracy, but substantial legal liability may apply to misrepresentations of results delivered through the mail. The CA Manager Medians are derived from Cambridge Associates LLC's proprietary database covering investment managers. Cambridge Associates LLC does not necessarily endorse or recommend the managers in this universe. Performance results are generally gross of investment management fees and do not include returns for discontinued managers.

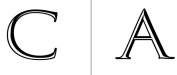
**Tech Spending: Will the Virtuous Cycle Turn Vicious?**

The economic expansion of the last decade was powered, in large part, by spectacular growth in capital spending in general and technology spending in particular. Over the last five years, investment in technology grew at an average annual rate of 25% in real terms, accounting for anywhere from 20% to 33% of total economic growth. Expenditures on equipment and software now represent a record 10% of nominal GDP, up from 7% in 1992 (see Table A).

Having over-invested during the expansion's heady years, corporations are now in the uncomfortable process of digesting these excesses. Tech orders fell 7.9% during the latter half of 2000, after growing 12.9% in the first half (see Table B). For the entire year, orders grew only 4%, down from their average annual 11.7% growth rate for the five years from 1995 through 1999. Some analysts believe that the drop in orders portends a 4% fall in tech spending in the first quarter of 2001, which would be the first decline for tech spending in a decade.

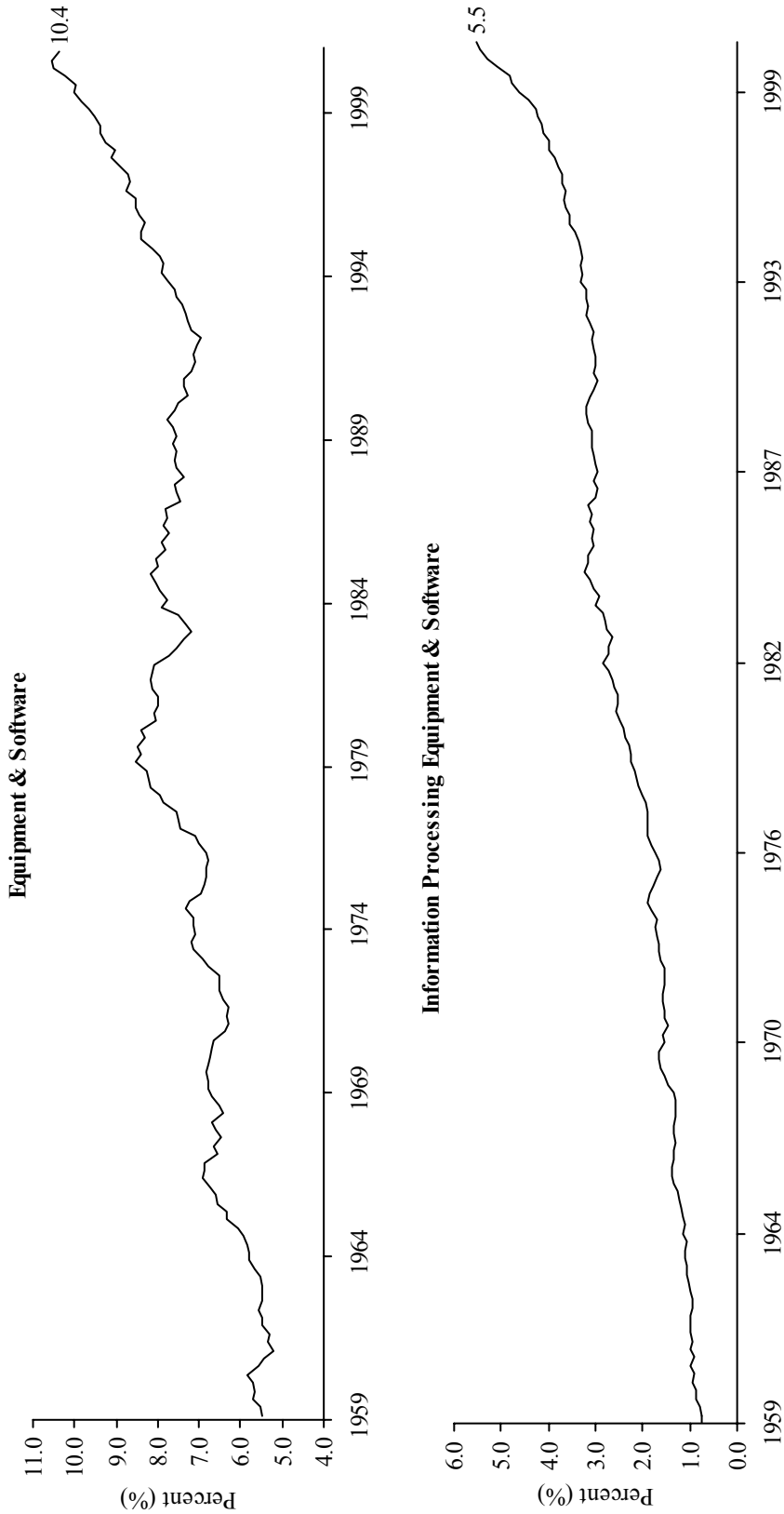
Profits fell 11% in the fourth quarter of 2000 (the worst performance since the recession year of 1991), compelling many firms to slash their capital spending budgets, as a toxic combination of diminishing sales and high debt expenses drains their ability to generate the cash flow needed to sustain the pace of investment spending. At the same time, external funding sources have become far less accommodating as tighter lending constraints and weak equity markets have raised the cost of capital. Retrenchment at the micro level is fanning fears that the investment boom will turn into a bust at the macro level, as a sharp deceleration in technology spending has a multiplier effect throughout the economy—the malign mirror image of the virtuous cycle propelled by capital investment during the boom years.

In today's economy, the amplification of a drop in tech spending is likely to be more severe than would be the case in an economy less dependent on growth in capital spending and productivity. In addition, the wealth effect functioned as an accelerator for both the economy and equity market when they were rising, and is doing so in the opposite direction on their way down. In this "reverse wealth effect," lower equity prices depress household spending, which intensifies pressure on product demand and corporate earnings. This, in turn, forces companies burdened with excess capacity and substantial debt to limit their capital spending. The question is whether this dynamic has already more-or-less run its course through the usual process of self-correction, as companies liquidate inventories and slash capital spending, or whether we have only just started down a long slippery slope, at the bottom of which lies a darkened plain of high unemployment, reduced purchasing power, diminished demand, and anguished retrenchment by consumers and corporations alike.



If the virtuous cycle indeed turns vicious, the slowdown would grow more pronounced and prolonged, confounding hopes for a V-shaped recovery in the second half of 2001. This may seem like an unlikely worst-case scenario, but if productivity growth and capital spending continue to deteriorate, as they did in the fourth quarter last year, we may see the underpinnings of the new economy's brave new world unravel further.

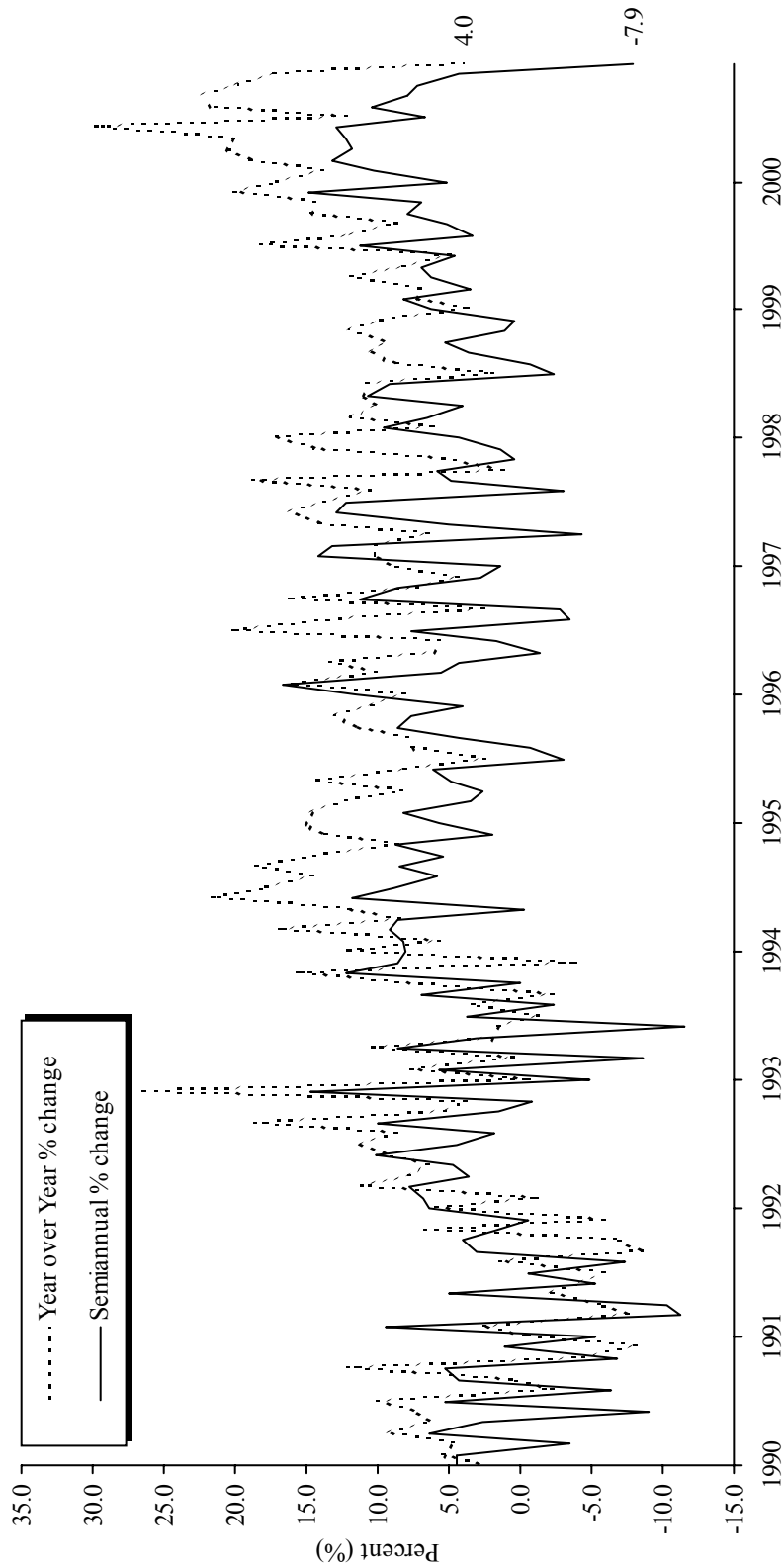
**Table A**  
**PERCENT OF GDP ATTRIBUTABLE TO CAPITAL INVESTMENT IN COMPUTER EQUIPMENT AND SOFTWARE**  
**March 31, 1959 - December 31, 2000**



Source: Calculated from data provided by Datastream International.  
 Notes: Graph represents quarterly data. Both series were calculated using seasonally adjusted current dollars. Information Processing Equipment & Software is one of four components of Equipment & Software.

**Table B**  
**INFORMATION TECHNOLOGY SALES ORDERS**

January 31, 1990 - December 31, 2000



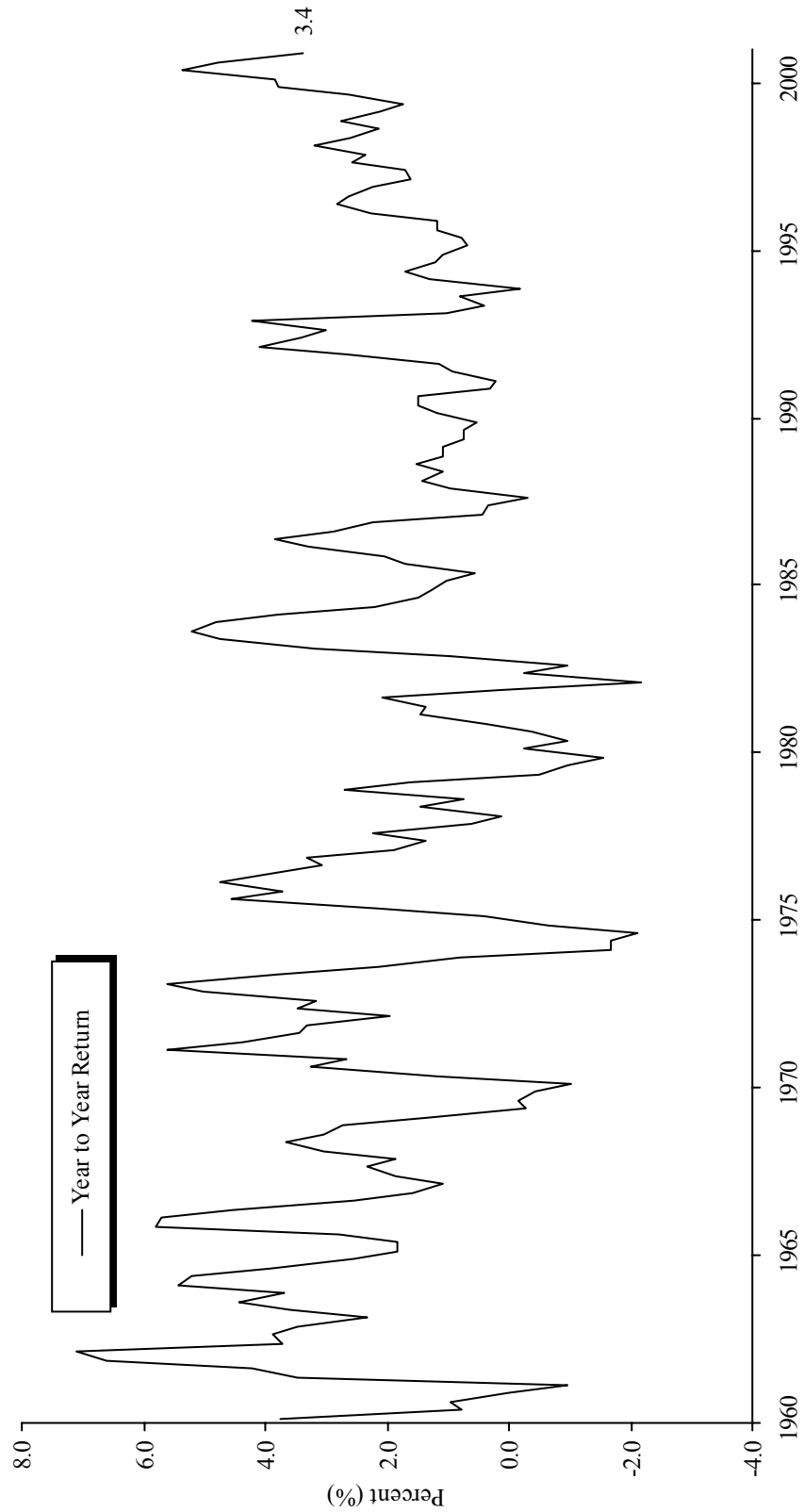
Source: U.S. Census Bureau.

Note: Graph represents rolling monthly data.

Table C

NONFARM PRODUCTIVITY

March 31, 1960 - December 31, 2000



Source: Datastream International.

Notes: Graph represents quarterly rolling data. Seasonally adjusted index.