

NORTHROP GRUMMAN CORP /DE/

Form 10-K

February 10, 2009

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**FORM 10-K**

- ☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2008  
or  
☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934

Commission file number 1-16411

**NORTHROP GRUMMAN CORPORATION**  
(Exact name of registrant as specified in its charter)

**DELAWARE**  
(State or other jurisdiction of  
incorporation or organization)

**95-4840775**  
(I.R.S. Employer  
Identification Number)

**1840 Century Park East, Los Angeles, California 90067 (310) 553-6262**  
(Address and telephone number of principal executive offices)

Securities registered pursuant to section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, \$1 par value	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.  
Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act.  
Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or such shorter period that the registrant was

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required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒

No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒

Accelerated filer ☐

Non-accelerated filer ☐

Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes ☐

No ☒

As of June 30, 2008, the aggregate market value of the common stock (based upon the closing price of the stock on the New York Stock Exchange) of the registrant held by non-affiliates was approximately \$22,160 million.

As of February 6, 2009, 327,180,490 shares of common stock were outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of Northrop Grumman Corporation's Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Rule 14A for the 2009 Annual Meeting of Stockholders are incorporated by reference in Part III of this Form 10-K.

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**PART I**

**Item 1. Business**

**HISTORY AND ORGANIZATION**

**History**

Northrop Grumman Corporation ( Northrop Grumman or the company ) is an integrated enterprise consisting of businesses that cover the entire defense spectrum, from undersea to outer space and into cyberspace. The companies that have become part of today's Northrop Grumman achieved historic accomplishments, from transporting Charles Lindbergh across the Atlantic to carrying astronauts to the moon's surface and back.

The company was originally formed in California in 1939 and was reincorporated in Delaware in 1985. From 1994 through 2002, the company entered a period of significant expansion through acquisitions of other businesses, most notably:

- n In 1994, Northrop Corporation acquired Grumman Corporation (Grumman) and was renamed Northrop Grumman. Grumman was a premier military aircraft systems integrator and builder of the Lunar Module that first delivered men to the surface of the moon.
- n In 1996, the company acquired the defense and electronics businesses of Westinghouse Electric Corporation, a world leader in the development and production of sophisticated radar and other electronic systems for the nation's defense, civil aviation, and other international and domestic applications.
- n In 2001, the company acquired Litton Industries (Litton), a global electronics and information technology enterprise, and one of the nation's leading full-service design, engineering, construction, and life cycle supporters of major surface ships for the United States (U.S.) Navy, U.S. Coast Guard, and international navies.
- n Also in 2001, Newport News Shipbuilding (Newport News) was added to the company. Newport News is the nation's sole designer, builder and refueler of nuclear-powered aircraft carriers and one of only two companies capable of designing and building nuclear-powered submarines.
- n In 2002, Northrop Grumman acquired the space and mission systems businesses of TRW Inc. (TRW), a leading developer of military and civil space systems and satellite payloads, as well as a leading global integrator of complex, mission-enabling systems and services.

The acquisition of these and other businesses have shaped the company into its present position as a premier provider of technologically advanced, innovative products, services and solutions in information and services, aerospace, electronics and shipbuilding. As prime contractor, principal subcontractor, partner, or preferred supplier, Northrop Grumman participates in many high-priority defense and commercial technology programs in the U.S. and abroad. The company conducts most of its business with the U.S. Government, principally the Department of Defense (DoD). The company also conducts business with local, state, and foreign governments and domestic and international commercial customers. For a description of the company's foreign operations, see Risk Factors in Part I, Item 1A.

**Organization**

On December 31, 2008, the company was aligned into seven reporting segments categorized into four primary businesses. The Mission Systems, Information Technology, and Technical Services segments are presented as

Information & Services. The Integrated Systems and Space Technology segments are presented as Aerospace. The Electronics and Shipbuilding segments are each presented as separate businesses.

The company, from time to time, acquires or disposes of businesses, and realigns contracts, programs or business areas among and within its operating segments that possess similar customers, expertise, and capabilities. Internal realignments are designed to more fully leverage existing capabilities and enhance development and delivery of

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products and services. The operating results for all periods presented have been revised to reflect these changes made through December 31, 2008.

During the second quarter of 2008, the company transferred certain programs and assets from the missiles business in the Mission Systems segment to the Space Technology segment. This transfer allows Mission Systems to focus on the rapidly growing command, control, communications, intelligence, surveillance, and reconnaissance (C3ISR) business. The missiles business will be an integrated element of the company's Aerospace business growth strategy.

In January 2008, the Newport News and Ship Systems businesses were realigned into a single operating segment called Northrop Grumman Shipbuilding. Previously, these businesses were separate operating segments which were aggregated into a single reporting segment for financial reporting purposes. In addition, certain Electronics businesses were transferred to Mission Systems during the first quarter of 2008.

*Subsequent Realignments* In January 2009, the company streamlined its organizational structure by reducing the number of reporting segments from seven to five. The five segments are Aerospace Systems, which combines the former Integrated Systems and Space Technology segments; Electronic Systems; Information Systems, which combines the former Information Technology and Mission Systems segments; Shipbuilding and Technical Services. The creation of the Aerospace Systems and Information Systems segments strengthens alignment with customers, improves the company's ability to execute on programs and win new business, and enhances cost competitiveness. This subsequent realignment is not reflected in any of the accompanying financial information.

**INFORMATION & SERVICES**

**Mission Systems**

The Mission Systems segment, headquartered in Reston, Virginia, is a leading global systems integrator of complex, mission-enabling systems for government, military, and commercial customers. Products and services are focused on the fields of command, control, communications, computers and intelligence (C4I), missile and air defense, airborne reconnaissance, intelligence management and processing, and decision support systems. The segment consists of two areas of business: Command, Control and Communications (C3); and Intelligence, Surveillance, and Reconnaissance (ISR).

*Command, Control and Communications* C3 supports the DoD, aerospace prime contractors, and other customers. Offerings include operational and tactical command and control systems; communications solutions and network management; tactical data link communications products and integration; network services; software defined radios; decision support and management information systems; system engineering and integration; land forces and global combat support; intelligence support to operations, mission planning and management applications; critical infrastructure security and force protection; logistics automation; robotic systems; homeland security solutions; naval systems engineering support and integration; command centers integration; and missile defense battle management and fire control systems.

*Intelligence, Surveillance and Reconnaissance* ISR supports the intelligence community, the DoD, and other federal agencies. Offerings include large systems integration; net-centric signals intelligence; airborne reconnaissance; payload control; sensor tasking and data collection; satellite ground stations; data collection and storage; information analysis and knowledge integration; computer network operations; information operations and information assurance; analysis and visualization tools; environmental and weather systems; special intelligence; and sustainment services.

**Information Technology**

The Information Technology segment, headquartered in McLean, Virginia, is a premier provider of information technology (IT) systems engineering and systems integration for the DoD, national intelligence, federal, civilian, state and local agencies, and commercial customers. The segment consists of four areas of business: Intelligence; Civilian Agencies; Commercial, State & Local; and Defense.

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*Intelligence* Intelligence provides IT systems, services and solutions primarily to the U.S. Intelligence Community, which includes customers in national agencies, DoD, homeland security, and other agencies at the federal, state and local level. This business area also collaborates with other Information Technology business areas by providing specialized technology solutions in areas such as information security, secure wireless communications, secure cross agency information-sharing and geospatial information systems. Services and solutions span the entire mission life cycle from requirements and technology development through processing and data analysis to information delivery.

*Civilian Agencies* Civilian Agencies provides IT systems, services and solutions primarily for federal civilian agencies, as well as government and commercial healthcare customers. Civilian Agencies customers include the departments of Homeland Security, Treasury, Justice, Transportation, State, Interior, and the U.S. Postal Service. Homeland Security offerings include secure networking, criminal justice systems, and identity management. Healthcare customers include the Department of Health and Human Services, DoD Health Affairs, the Centers for Disease Control and Prevention, the Food and Drug Administration, the Department of Veterans Affairs, and a number of pharmaceutical manufacturers. Healthcare offerings include enterprise architecture, systems integration, infrastructure management, document management, human capital management, case management, and specialized health IT solutions in electronic medical records pertaining to public health, bio-surveillance, benefits, and clinical research.

*Commercial, State & Local* Commercial, State & Local provides IT systems, services and solutions primarily for state and local agencies and commercial customers. The commercial business centers on managed IT services both as a prime contractor and partner in addition to specialized solutions that address specific business needs. The state and local focus includes public safety, secure wireless solutions, human services, and managed IT services. This business area provides IT outsourcing services on a service level agreement basis, where contractual terms are based on infrastructure volume and service levels. Services include management of data centers, networks, desktops, storage, security, help desk, and applications. Specialized state and local offerings include systems for police/fire/medical emergency dispatch, public safety command centers, biometric identification, and human services.

*Defense* Defense provides IT systems, services and solutions to all elements of the DoD including the Air Force, Navy, Army, Marines, the Office of the Secretary of Defense, and the Unified Combatant Commands. Offerings include business applications and systems integration related to human capital and business management, logistics, transportation, supply chain, and combat systems support. Other offerings consist of IT and network infrastructures, including modernization, architecture, design and capacity modeling. Defense also provides solutions and services for defense technology laboratories and research and development centers, system program offices, operational commands, education and training commands, test centers, and other defense agencies.

**Technical Services**

The Technical Services segment, headquartered in Herndon, Virginia, is a leading provider of logistics, infrastructure, and sustainment support, while also providing a wide array of technical services including training and simulation. The segment provides infrastructure management and maintenance, training and preparedness, and logistics and life cycle management in a wide array of operating environments. Technical Services consists of three areas of business: Systems Support; Training and Simulation; and Life Cycle Optimization and Engineering.

*Systems Support* Systems Support provides infrastructure and base operations management, including base support and civil engineering work, military aerial and ground range operations, support functions which include space launch services, construction, combat vehicle maintenance, protective and emergency services, and range-sensor-instrumentation operations. Primary customers include the Department of Energy, the DoD, the

Department of Homeland Security, and the U.S. Intelligence community, in both domestic and international locations.

*Training and Simulation* Training and Simulation provides realistic and comprehensive training to senior military leaders and peacekeeping forces, designs and develops future conflict training scenarios, and provides

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U.S. warfighters and international allies with live, virtual, and constructive training programs. This business area also offers diverse training applications ranging from battle command to professional military education. Primary customers include the DoD, Department of State and Department of Homeland Security.

*Life Cycle Optimization and Engineering* Life Cycle Optimization and Engineering provides complete life cycle product support and weapons system sustainment. This business area is focused on providing Performance Based Logistical support to the warfighter including supply chain management services, warehousing and inventory transportation, field services and mobilization, sustaining engineering, maintenance, repair and overhaul supplies, and on-going weapon maintenance and technical assistance. The group specializes in rebuilding essential parts and assemblies. Primary customers include the DoD as well as international military and commercial customers.

**AEROSPACE**

**Integrated Systems**

The Integrated Systems segment, headquartered in El Segundo, California, is a leader in the design, development, and production of airborne early warning, electronic warfare and surveillance systems, and battlefield management systems, as well as manned and unmanned tactical and strike systems. The segment designs, develops, produces, and supports fully missionized integrated systems and subsystems in the areas of battlespace awareness, command and control systems, integrated combat systems, and airborne ground surveillance.

Integrated Systems is involved in several manned vehicle programs such as subcontractor work on the F/A-18 and F-35 programs and prime contract work on the B-2 program and the Multi-Platform Radar Technology Insertion Program (MP-RTIP). For the F/A-18, Integrated Systems is responsible for the full integration of the center and aft fuselage and vertical tail sections and associated subsystems. For the F-35, Integrated Systems is responsible for the detailed design and integration and production of the center fuselage and weapons bay, systems engineering, mission system software, autonomic logistics and global sustainment, ground and flight test support, signature/low observables development, and support of modeling and simulation activities. Integrated Systems is the prime systems integration contractor for the MP-RTIP, which will provide advanced radar capabilities for the Global Hawk Unmanned Aerial Vehicle (UAV). Integrated Systems is working on a radar and avionics upgrade program for the B-2 bomber and is a prime integrator for all logistics support activities including program depot maintenance.

Integrated Systems is also a leader in unmanned vehicle programs such as the Global Hawk, the Unmanned Combat Air System Carrier Demonstration (UCAS-D), Aerial Targets, and the Fire Scout. Integrated Systems is the prime contractor for these product lines with the exception of the Army version of Fire Scout for Future Combat Systems (FCS). The Global Hawk is a high altitude long endurance unmanned aerial reconnaissance system. UCAS-D is a development/demonstration program that will design, build and test two demonstration vehicles that will conduct a carrier demonstration. The technology demonstrations are to show carrier control area operations, catapult launch, and an arrested landing of a low observable unmanned aerial combat vehicle. Aerial Targets has two primary models, the BQM-74 and the BQM-34 and is the prime contractor on multiple domestic and international contracts. Fire Scout is a vertical takeoff and landing tactical UAV system in development and consists of two versions – the Vertical Takeoff and Landing Unmanned Air Vehicle (VTUAV) for the U.S. Navy and the FCS Class IV UAV for the U.S. Army.

The E-2 Hawkeye is the U.S. Navy's airborne battle management command and control mission system platform providing airborne early warning detection, identification, tracking, targeting, and communication capabilities. The company is currently performing on a follow-on multi-year contract for eight E-2C aircraft to be delivered to the U.S. Navy through 2009 (two aircraft were delivered in each of 2006, 2007, and 2008). The company is also

developing the next generation capability including radar, mission computer, vehicle, and other system enhancements called the E-2D Advanced Hawkeye under a System Design and Development (SDD) contract with the U.S. Navy. Pilot Production of three aircraft was authorized in 2007 and long-lead funding for the first lot of Low Rate Initial Production, consisting of two aircraft, was received in December 2007.

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Joint STARS (Joint Surveillance Target Attack Radar System) detects, locates, classifies, tracks, and targets potentially hostile ground movement in all weather conditions. It is designed to operate around the clock in constant communication through secure data links with U.S. Air Force command posts, U.S. Army mobile ground stations, or centers for military analysis far from the point of conflict. The Joint STARS fleet has flown for more than 40,000 hours for Operation Iraqi Freedom over the last 6 years. The program is currently developing system and airframe performance upgrades under an ongoing Systems Improvement Program contract, including improvements in surveillance systems and sensor processing, battlement management capability, interoperability, and communication suite. Fleet sustainment is performed by Northrop Grumman through the Total Systems Support Responsibility contract, currently in its ninth year of performance, with a contract term that extends through 2021. In 2007, an initial non-recurring contract was awarded to design and re-engine the Joint STARS fleet with more reliable, powerful and fuel efficient engines. Follow-on nonrecurring and initial recurring shipsets were awarded in May 2008. In December 2008, the program's re-engined test aircraft successfully made its maiden flight. Risk reduction contracts for an upcoming Joint STARS Radar Modernization program were initiated in 2008.

The BAMS (Broad Area Maritime Surveillance) Unmanned Aircraft System SDD contract was awarded in 2008 and leverages the Global Hawk platform but integrates maritime requirements including sensors, communications, mission control systems and platform enhancements to provide a persistent maritime Intelligence, Surveillance, and Reconnaissance (ISR) data collection and dissemination capability to the U.S. Navy. The BAMS Unmanned Aircraft System contract includes options for Low Rate Initial Production and for furnishing the BAMS Unmanned Aircraft System to Australia.

The EA-6B Prowler is currently the armed services' primary offensive tactical radar jamming aircraft. Integrated Systems has developed the next generation mission system for this aircraft under the Increased Capacity (ICAP) III contract and has completed the final test and evaluation phase. The company completed the low-rate initial production for ICAP III Kits during 2006, and has been awarded follow-on contracts for ICAP III Kits & Spares, with deliveries through 2011. In addition, the company is performing on a contract to incorporate the ICAP III mission system into an F/A-18 platform, designated the EA-18G. Integrated Systems is the principal subcontractor to Boeing for this program, which is currently in the SDD phase. Northrop Grumman has been awarded contracts for Low Rate Initial Production I and II with hardware deliveries that commenced in the second quarter of 2008.

Other Integrated Systems programs include the Littoral Combat Ship Mission Package Integration contract and Mine Counter Measures contracts with multiple customers that focus on detecting and neutralizing in-land, coastal and water surface/subsurface mines.

**Space Technology**

The Space Technology segment, headquartered in Redondo Beach, California, develops and integrates a broad range of systems at the leading edge of space, defense, and electronics technology. The segment supplies products primarily to the U.S. Government that are critical to maintaining the nation's security and leadership in science and technology. Space Technology's business areas focus on the design, development, manufacture, and integration of spacecraft systems and subsystems, electronic and communications payloads, intercontinental ballistic missile systems, and high energy laser systems and subsystems. Products and services are grouped into the following areas of business: Civil Systems; Military Systems; Missile Systems; National Systems; and Technology & Emerging Systems (Technology).

*Civil Systems* The Civil Systems business area produces and integrates space-based systems, instruments, and services primarily for the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration, and other governmental agencies. These systems are primarily used for space science,

earth observation and environmental monitoring, and exploration missions. A variety of systems and services are provided, including mission and system engineering services, satellite and instrument systems, mission operations, and propulsion systems. Major programs include National Polar-orbiting Operational Environmental



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Satellite System (NPOESS), the James Webb Space Telescope (JWST), and the legacy Chandra space telescope and Earth Observing System programs.

***Military Systems*** Military Systems produces and integrates spiral development programs and operational programs associated with the U.S. Air Force, Missile Defense Agency (MDA), and other military customers. Responsibilities include study design, build integration, launch, and operations of major U.S. military space systems. Programs include the Advanced Extremely High Frequency (AEHF) payload, Space Tracking and Surveillance System (STSS), and the communication payload for the legacy Milstar program, currently in operation. The Defense Support Program is a contract for monitoring ballistic missile launches for the U.S. Air Force.

***Missile Systems*** Missile Systems supports the U.S. Air Force Intercontinental Ballistic Missile (ICBM) program, the MDA Kinetic Energy Interceptor (KEI) program and other large missile customers. Offerings include air and missile system engineering and integration; modeling and simulation; program management; system test and integration; development and deployment; missile system sustainment and modernization services; and development and test activities for complex missile systems.

***National Systems*** The National Systems business area gives the nation's monitoring systems a global reach and enhanced national security. Addressing requirements in space-based intelligence, surveillance, and reconnaissance systems, National Systems provides mission and system engineering, satellite systems, and mission operations. Customers are predominantly restricted, as are the major programs.

***Technology & Emerging Systems*** Technology performs government funded research and development in support of the four business areas above. Programs include the Airborne Laser (ABL), other directed energy programs and advanced concepts programs.

**ELECTRONICS**

The Electronics segment, headquartered in Linthicum, Maryland, designs, develops, produces, integrates, and supports high performance sensors, intelligence processing, navigation systems, test and simulation systems, and weapons operating in all environments from undersea to outer space and cyberspace. It also develops, produces, integrates, and supports power, power control, and ship control systems for commercial and naval ships in domestic and international markets. In select markets it performs as a prime contractor, integrating multiple subsystems to provide complete systems to meet customers' solution requirements. The segment is composed of seven areas of business: Aerospace Systems; Defensive Systems; Government Systems; Land Forces; Naval & Marine Systems; Navigation Systems; and Space & Intelligence, Surveillance, & Reconnaissance (ISR) Systems.

***Aerospace Systems*** Aerospace Systems provides sensors, sensor processing, integrated sensor suites, and radar countermeasure systems for military surveillance and precision-strike; missile tracking and warning; and radio frequency electronic warfare. Fire control radars include systems for the F-16, F-22A, F-35, and B-1B. Navigation radars include commercial and military systems for transport and cargo aircraft. Surveillance products include the Airborne Warning and Control System radar, the Multi-role Electronically Scanned Array (MESA) radar, the MP-RTIP, the ship-board Cobra Judy Replacement radar, and multiple payloads on the P-8A. Radio frequency electronic warfare products include radar warning receivers, self-protection jammers, and integrated electronic warfare systems for aircraft such as the EA-6B, EA-18, F-16, and F-15.

*Defensive Systems* Defensive Systems provides systems that support combat aviation by protecting aircraft and helicopters from attack, by providing capabilities for precise targeting and tactical surveillance, by improving mission availability through automated test systems, and by improving mission skills through advanced simulation systems. A wide variety of fixed wing and helicopter protection systems include threat detection and laser-based countermeasures systems to defeat ground-launched infrared-guided missiles. Defensive Systems countermeasures systems are currently installed on over 40 types of aircraft, many of which are conducting combat operations in the Global War on Terror. Targeting systems utilize lasers for target designation and precision weapon delivery, image processing, and target acquisition, identification, and tracking. The LITENING targeting pod system is

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combat-proven on the AV-8B, A-10A/C, B-52H, F-15E, F-16, and F/A-18A/C/D. Test systems include systems to test electronic components of combat aircraft on the flight line and in repair facilities. Defensive Systems also provides advanced simulators for use on test ranges and training facilities to emulate threats of potential adversaries. Customers include the U.S. government and a wide variety of international allies.

*Government Systems* Government Systems provides products and services to meet the needs of governments for improvements in the effectiveness of their civil and military infrastructure and of their combat and counter-terrorism operations. This includes systems and system integration of products and services for postal automation, for the detection and alert of Chemical, Biological, Radiological, Nuclear, and Explosive material, and for homeland defense, communications, and enterprise management. Key programs include: Flats Sequencing System; International Sorting Centers; U.S. Postal Service bio-detection systems; and national level command and control, integrated air and missile defense and homeland defense systems for international customers.

*Land Forces* Land Forces provides a full range of warfighting system solutions for the digital battlefield, including fire control systems for airborne and tracked vehicles, air and ground sensors to detect enemy movement, tactical range finding and precise laser designation, and systems that detect and defend against enemy fire. These solutions include precision guided munitions for manned and unmanned air vehicle delivery, laser designators and rangefinders, ground-based tactical radars for warning of missile and artillery attack, situational awareness sensors, unattended sensor systems, ground vehicle communication networks, and compact, lightweight Synthetic Aperture Radar / Ground Moving Target Indicator (SAR/GMTI) radars for unmanned/rotary wing aircraft. Sensor technologies provided include radio frequency, infrared, and electro-optical. Principal programs include the Longbow Weapons System for the Apache attack helicopter, the Lightweight Laser Designator Rangefinder, the Viper Strike precision guided munitions, the Vehicular Intercommunication System (VIS), the Firefinder counter-battery integrated radar system, the Ground/Air Task Oriented Radar System (G/ATOR), and the lightweight STARLite SAR/GMTI for unmanned air vehicles.

*Naval & Marine Systems* Naval and Marine Systems provides major subsystems and subsystem integration for sensors, sensor processing, missile launching, ship controls and power generation. It provides systems to military surface and subsurface platforms, and bridge and machinery control systems for commercial maritime applications. Principal programs include: radars for navigation; radars for gun fire control and cruise missile defense; bridge management and control systems; power generation systems for aircraft carriers; power and propulsion systems for the *Virginia*-class submarine; launch systems for Trident submarines and the KEI program; the Advanced SEAL Delivery System mini-submarine; and unmanned semi-autonomous naval systems.

*Navigation Systems* Navigation Systems provides advanced navigation, avionics systems, and command and control centers for military and commercial applications. Its products are used in military air, land, sea, and space systems as well as commercial space and aircraft in both U.S. and international markets. Its subsidiaries, Northrop Grumman LITEF (Freiburg, Germany) and Northrop Grumman Italia (Pomezia, Italy), are leading European inertial sensors and systems suppliers. Key programs and applications include: integrated avionics for the U.S. Marine Corps attack and utility helicopters and U.S. Navy E-2 aircraft; military navigation and positioning systems for the F-16 fighter, F-22A fighter/attack aircraft, Eurofighter, and U.S. Navy MH-60 helicopter; navigation systems for commercial aircraft; navigation systems for military and civil space satellites and deep space exploration. Navigation Systems also develops and produces fiber-optic acoustic systems for underwater surveillance for *Virginia*-class submarines and the AN/TYQ-23 multi-service mobile tactical command centers for the U.S. Marine Corps and U.S. Air Force.

*Space & ISR Systems* Space & ISR Systems provides space-based sensor and exploitation systems for civil, military, and intelligence community customers, as well as ground/surface based command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) solutions to process, exploit, and disseminate multi-sensor data. Capabilities include space-based payloads, radar, Overhead Non-Imaging Infrared sensors, electro-optic & multi/hyper-spectral sensors, passive microwave sounders, mission processing solutions, and Service-Oriented open architecture C4ISR systems. The current portfolio of programs includes

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**NORTHROP GRUMMAN CORPORATION**

Spaced-Based Infrared System as the lead for the payload and mission processing systems, the Distributed Common Ground System Army as the system integrator, as well as a variety of civil space and restricted programs.

**SHIPBUILDING**

The Shipbuilding segment, headquartered in Newport News, Virginia, is the nation's sole industrial designer, builder, and refueler of nuclear-powered aircraft carriers and one of only two companies capable of designing and building nuclear-powered submarines for the U.S. Navy. Shipbuilding is also one of the nation's leading full service providers for the design, engineering, construction, and life cycle support of major programs for the U.S. Navy, U.S. Coast Guard, international navies, and for commercial vessels. The segment includes the following areas of business: Aircraft Carriers; Expeditionary Warfare; Surface Combatants; Submarines; Coast Guard & Coastal Defense; Fleet Support; Commercial; and Services & Other.

*Aircraft Carriers* The U.S. Navy's newest carrier and the last of the Nimitz class, the *USS George H. W. Bush*, was commissioned in January 2009. Advanced design and preparation efforts have been ongoing for the new generation carrier, the Ford class, which will incorporate transformational technologies that will result in manning reductions, improved war fighting capability, and a new nuclear propulsion plant design. In September 2008, Shipbuilding received a \$5.1 billion contract award for construction of the first ship of the class, the *Gerald R. Ford*, which is scheduled for delivery in 2015. The company also provides ongoing maintenance for the U.S. Navy aircraft carrier fleet through overhaul, refueling, and repair work. Shipbuilding is currently performing the refueling and complex overhaul of the *USS Carl Vinson* with redelivery to the U.S. Navy anticipated in early 2009. Planning for the *USS Theodore Roosevelt* refueling and complex overhaul began in the fall of 2006 and the ship is expected to arrive at Newport News, Virginia in the summer of 2009.

*Expeditionary Warfare* Expeditionary Warfare programs include the design and construction of amphibious assault ships for the U.S. Navy, including the LHD 1 Wasp class and the San Antonio LPD 17 class. Shipbuilding is the sole provider for the LHD class of large-deck, 40,500-ton multipurpose amphibious assault ships, which serve as the centerpiece of an Amphibious Ready Group. Currently, the LHD-8 is under construction and is a significant upgrade from the preceding seven ships of its class. The LHD-8 is scheduled for delivery in mid-2009. In 2007, the construction contract for LHA 6, the first in a new class of enhanced amphibious assault ships, was awarded. The ship is scheduled for delivery in 2013. Shipbuilding is also the sole provider of the LPD 17 class of ships, which function as amphibious transports. The initial four ships were delivered in 2005, 2006, 2007, and 2008, and five LPD 17 ships are currently under construction.

*Surface Combatants* Surface Combatants includes the design and construction of the Arleigh Burke DDG 51 class Aegis guided missile destroyers, and the design and construction of DDG 1000 (previously DD(X)), the Navy's future transformational surface combatant class. Shipbuilding is one of two prime contractors designing and building DDG 51 class destroyers, which provide primary anti-aircraft and anti-missile ship protection for the U.S. Navy fleet. Three Arleigh Burke class destroyers are currently under construction. In 2006, Shipbuilding was awarded Phase IV detailed design and long lead construction funding for the initial DDG 1000. The construction award for the second ship in the class, DDG 1001, was received in 2008. The contract establishes a joint work share between Shipbuilding and General Dynamics Bath Iron Works (which will produce the first ship in the class) for detailed design and construction of the DDG 1000 class of ships. The advanced technologies developed for the DDG 1000 are anticipated to be incorporated into the next generation guided missile cruiser CG(X).

*Submarines* Northrop Grumman is one of only two U.S. companies capable of designing and building nuclear-powered submarines. In February 1997, the company and Electric Boat, a wholly owned subsidiary of General Dynamics Corporation, reached an agreement to cooperatively build *Virginia* class nuclear attack submarines. The initial four submarines in the class were delivered in 2004, 2006, and 2008. Electric Boat and Shipbuilding were awarded a construction contract in August 2003 for the second block of six *Virginia* class submarines, the first of which was delivered by Electric Boat in August 2008. Construction on the remaining five submarines is

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underway, with the last scheduled to be delivered in 2014. In December 2008, Shipbuilding and Electric Boat were awarded a construction contract for the third block of eight *Virginia* class submarines. The multi-year contract allows Shipbuilding and its teammate to proceed with the construction of one submarine per year in 2009 and 2010, and two submarines per year from 2011 to 2013. The eighth submarine to be procured under this contract is scheduled for delivery in 2019.

*Coast Guard & Coastal Defense* Shipbuilding is a joint venture partner along with Lockheed Martin for the Coast Guard's Deepwater Modernization Program. Shipbuilding has design and production responsibility for surface ships. In 2006, the Shipbuilding/Lockheed Martin joint venture was awarded a 43-month contract extension for the Deepwater program. The first National Security Cutter (NSC), *USCGC Berthoff*, was delivered to the Coast Guard in 2008. Currently the *Waesche* (NSC2) and *Stratton* (NSC3) are in construction, and long lead procurement is underway for NSC4.

*Fleet Support* Shipbuilding provides after-market services, including on-going maintenance and repair work, for a wide array of naval and commercial vessels. The company has ship repair facilities in the U.S. Navy's largest homeports of Norfolk, Virginia, and San Diego, California.

*Commercial* Under the Polar Tanker program, Shipbuilding was under contract to produce five double-hulled tankers. These tankers each transport one million barrels of crude oil from Alaska to west coast refineries and are fully compliant with the Oil Pollution Act of 1990. The last ship under this program was delivered in mid-2006.

*Services & Other* Shipbuilding provides various services to commercial nuclear and non-nuclear industrial customers. In January 2008, Savannah River Nuclear Solutions, a joint venture among Shipbuilding, Fluor Corporation, and Honeywell, was awarded a contract for site management and operations of the U.S. Department of Energy's Savannah River Site in Aiken, South Carolina. In October 2008, Shipbuilding announced the formation of a joint venture with AREVA NP to build a new manufacturing and engineering facility in Newport News, Virginia, to help supply the growing American nuclear energy sector.

### **Corporate**

The company's principal executive offices are located at 1840 Century Park East, Los Angeles, California 90067. The company's telephone number is (310) 553-6262. The company's home page on the Internet is [www.northropgrumman.com](http://www.northropgrumman.com). References to the company's website in this report are provided as a convenience and do not constitute, and should not be viewed as, incorporation by reference of the information contained on, or available through, the website. Therefore, such information should not be considered part of this report.

### **SUMMARY SEGMENT FINANCIAL DATA**

For a more complete understanding of the company's segment financial information, see Segment Operating Results in Part II, Item 7, and Note 7 to the consolidated financial statements in Part II, Item 8.

### **CUSTOMERS AND REVENUE CONCENTRATION**

The company's primary customer is the U.S. Government. Revenue from the U.S. Government accounted for approximately 90 percent of total revenues in 2008, 2007, and 2006. No other customer accounted for more than 10 percent of total revenue during any period presented. No single product or service accounted for more than 10 percent of total revenue during any period presented. See Risk Factors in Part I, Item 1A.





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The following table summarizes the number of patents the company owns or has pending as of December 31, 2008:

	Owned	Pending	Total
U.S. patents	3,210	447	<b>3,657</b>
Foreign patents	2,091	470	<b>2,561</b>
Total	5,301	917	<b>6,218</b>

Patents developed while under contract with the U.S. Government may be subject to use by the U.S. Government. In addition the company licenses intellectual property to, and from, third parties. Management believes the company's ability to conduct its operations would not be materially affected by the loss of any particular intellectual property right.

**SEASONALITY**

No material portion of the company's business is considered to be seasonal. The timing of revenue recognition is based on several factors including the timing of contract awards, the incurrence of contract costs, cost estimation, and unit deliveries. See Revenue Recognition in Part II, Item 7.

**BACKLOG**

At December 31, 2008, total backlog was \$78.1 billion compared with \$63.7 billion at the end of 2007. Approximately 65 percent of the \$37.4 billion funded backlog at December 31, 2008, is expected to be converted into sales in 2009.

Total backlog includes both funded backlog (firm orders for which funding is contractually obligated by the customer) and unfunded backlog (firm orders for which funding is not currently contractually obligated by the customer). Unfunded backlog excludes unexercised contract options and unfunded indefinite delivery indefinite quantity (IDIQ) orders. For multi-year services contracts with non-federal government customers having no stated contract values, backlog includes only the amounts committed by the customer. For backlog by segment see Backlog in Part II, Item 7.

**RAW MATERIALS**

The most significant raw material required by the company is steel, used primarily for shipbuilding. The company has mitigated supply risk by negotiating long-term agreements with a number of steel suppliers. In addition, the company has mitigated price risk related to its steel purchases through certain contractual arrangements with the U.S. Government. While the company has generally been able to obtain key raw materials required in its production processes in a timely manner, a significant delay in receipt of these supplies by the company could have a material adverse effect on the company's consolidated financial position, results of operations, or cash flows. See Risk Factors in Part I, Item 1A.

**GOVERNMENT REGULATION**

The company's business is affected by numerous laws and regulations relating to the award, administration and performance of U.S. Government contracts. See Risk Factors in Part I, Item 1A.

Certain programs with the U.S. Government that are prohibited by the customer from being publicly discussed in detail are referred to as "restricted" in this Form 10-K. The consolidated financial statements and financial information contained within this Form 10-K reflect the operating results of restricted programs under accounting principles generally accepted in the United States of America (U.S. GAAP). See Risk Factors in Part I, Item 1A.

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**RESEARCH AND DEVELOPMENT**

Company-sponsored research and development activities primarily include independent research and development (IR&D) efforts related to government programs. IR&D expenses are included in general and administrative expenses and are generally allocated to U.S. Government contracts. Company-sponsored research and development expenses totaled \$576 million, \$534 million, and \$569 million in 2008, 2007, and 2006, respectively. Expenses for research and development sponsored by the customer are charged directly to the related contracts.

**EMPLOYEE RELATIONS**

The company believes that it maintains good relations with its 123,600 employees, of which approximately 18 percent are covered by 36 collective bargaining agreements. The company expects to re-negotiate seven of its collective bargaining agreements in 2009. It is not expected that the results of these negotiations will, either individually or in the aggregate, have a material adverse effect on the company's results of operations. See Risk Factors in Part I, Item 1A.

**ENVIRONMENTAL MATTERS**

Federal, state, and local laws relating to the protection of the environment affect the company's manufacturing operations. The company has provided for the estimated cost to complete environmental remediation where the company has determined it is probable that the company will incur such costs in the future to address environmental impacts at currently or formerly owned or leased operating facilities, or at sites where it has been named a Potentially Responsible Party (PRP) by the Environmental Protection Agency or similarly designated by other environmental agencies. These estimates may change given the inherent difficulty in estimating environmental cleanup costs to be incurred in the future due to the uncertainties regarding the extent of the required cleanup, determination of legally responsible parties, and the status of laws, regulations, and their interpretations.

In order to assess the potential impact on the company's financial statements, management estimates the possible remediation costs that reasonably could be incurred by the company on a site-by-site basis. Such estimates take into consideration the professional judgment of the company's environmental engineers and, when necessary, consultation with outside environmental specialists. In most instances, only a range of reasonably possible costs can be estimated. However, in the determination of accruals, the most probable amount is used when determinable, and the minimum is used when no single amount is more probable. The company records accruals for environmental cleanup costs in the accounting period in which the company's responsibility is established and the costs can be reasonably estimated. The company does not anticipate and record insurance recoveries before it has determined that collection is probable.

Management estimates that at December 31, 2008, the range of reasonably possible future costs for environmental remediation sites is \$186 million to \$279 million, of which \$231 million is accrued in other current liabilities in the consolidated statements of financial position. Environmental accruals are recorded on an undiscounted basis. At sites involving multiple parties, the company provides environmental accruals based upon its expected share of liability, taking into account the financial viability of other jointly liable parties. Environmental expenditures are expensed or capitalized as appropriate. Capitalized expenditures relate to long-lived improvements in currently operating facilities. In addition, should other PRPs not pay their allocable share of remediation costs, the company may have to incur costs in addition to those already estimated and accrued, which could have a material effect on the company's consolidated financial position, results of operations, or cash flows. The company has made the investments it believes necessary in order to comply with environmental laws. Although management cannot predict whether new information gained as

projects progress will materially affect the estimated liability accrued, management does not anticipate that future remediation expenditures will have a material adverse effect on the company's consolidated financial position, results of operations, or cash flows.

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**NORTHROP GRUMMAN CORPORATION**

**COMPETITIVE CONDITIONS**

Northrop Grumman, along with Lockheed Martin Corporation, The Boeing Company, Raytheon Company, and General Dynamics Corporation are among the largest companies in the U.S. defense industry at this time. Northrop Grumman competes against these and other companies for a number of programs, both large and small. Intense competition and long operating cycles are both key characteristics of Northrop Grumman's business and the defense industry. It is common in this industry for work on major programs to be shared among a number of companies. A company competing to be a prime contractor may, upon ultimate award of the contract to another party, turn out to be a subcontractor for the ultimate prime contracting party. It is not uncommon to compete for a contract award with a peer company and, simultaneously, perform as a supplier to or a customer of such competitor on other contracts. The nature of major defense programs, conducted under binding contracts, allows companies that perform well to benefit from a level of program continuity not common in many industries.

The company's success in the competitive defense industry depends upon its ability to develop and market its products and services, as well as its ability to provide the people, technologies, facilities, equipment, and financial capacity needed to deliver those products and services with maximum efficiency. It is necessary to maintain, as the company has, sources for raw materials, fabricated parts, electronic components, and major subassemblies. In this manufacturing and systems integration environment, effective oversight of subcontractors and suppliers is as vital to success as managing internal operations.

Similarly, there is intense competition among many companies in the information and services markets, which are generally more labor intensive with competitive margin rates over contract periods of shorter duration. Competitors in the information and services markets include the defense industry participants mentioned above as well as many other large and small entities with expertise in various specialized areas. The company's ability to successfully compete in the information and services markets depends on a number of factors; most important is the capability to deploy skilled professionals, many requiring security clearances, at competitive prices across the diverse spectrum of these markets. Accordingly, various workforce initiatives are in place to ensure the company is successful in attracting, developing and retaining sufficient resources to maintain or improve its competitive position within these markets. See Risk Factors in Part I, Item 1A.

**EXECUTIVE OFFICERS**

See Part III, Item 10, for information about executive officers of the company.

**AVAILABLE INFORMATION**

Throughout this Form 10-K, the company incorporates by reference information from parts of other documents filed with the Securities and Exchange Commission (SEC). The SEC allows the company to disclose important information by referring to it in this manner, and you should review this information in addition to the information contained herein.

The company's annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and proxy statement for the annual shareholders' meeting, as well as any amendments to those reports, are available free of charge through the company's web site as soon as reasonably practicable after electronic filing of such material with the SEC. You can learn more about the company by reviewing the company's SEC filings on the company's web site. The company's SEC reports can be accessed through the investor relations page of the company's web site at

[www.northropgrumman.com](http://www.northropgrumman.com).

The SEC also maintains a web site at [www.sec.gov](http://www.sec.gov) that contains reports, proxy statements and other information regarding SEC registrants, including Northrop Grumman. The public may read and copy any materials filed by the company with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

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**Item 1A. Risk Factors**

The company's consolidated financial position, results of operations and cash flows are subject to various risks, many of which are not exclusively within the company's control, that may cause actual performance to differ materially from historical or projected future performance. The company urges investors to carefully consider the risk factors described below in evaluating the information contained in this report.

- n The Company Depends Heavily on a Single Customer, the U.S. Government, for a Substantial Portion of the Company's Business, Including Programs Subject to Security Classification Restrictions on Information. Changes Affecting this Customer's Capacity to Do Business with the Company or the Effects of Competition in the Defense Industry Could Have a Material Adverse Effect On the Company or Its Prospects.***

Approximately 91 percent of the company's revenues during 2008 were derived from products and services ultimately sold to the U.S. Government and are therefore affected by, among other things, the federal budget process. The company is a supplier, either directly or as a subcontractor or team member, to the U.S. Government and its agencies as well as foreign governments and agencies. These contracts are subject to the respective customers' political and budgetary constraints and processes, changes in customers' short-range and long-range strategic plans, the timing of contract awards, and in the case of contracts with the U.S. Government, the congressional budget authorization and appropriation processes, the U.S. Government's ability to terminate contracts for convenience or for default, as well as other risks such as contractor suspension or debarment in the event of certain violations of legal and regulatory requirements. The termination or failure to fund one or more significant contracts by the U.S. Government could have a material adverse effect on the company's results of operations or prospects. Current or future economic conditions could result in the reprioritization of or reduction in future U.S. Government defense spending levels.

In the event of termination for the government's convenience, contractors are normally protected by provisions covering reimbursement for costs incurred. The company is involved as a plaintiff in a lawsuit concerning a contract terminated for convenience. See Other Matters in Part I, Item 3. Termination resulting from the company's default could expose the company to liability and have a material adverse effect on its ability to compete for contracts.

In addition, a material amount of the company's revenues and profits is derived from programs that are subject to security classification restrictions (restricted business), which could limit the company's ability to discuss details about these programs, their risks or any disputes or claims relating to such programs. As a result, investors might have less insight into the company's restricted business than other businesses of the company or could experience less ability to evaluate fully the risks, disputes or claims associated with restricted business.

The company's success in the competitive defense industry depends upon its ability to develop and market its products and services, as well as its ability to provide the people, technologies, facilities, equipment, and financial capacity needed to deliver those products and services with maximum efficiency. A loss of business to the company's competitors could have a material adverse effect on the company's ability to generate favorable financial results and maintain market share.

- n Many of the Company's Contracts Contain Performance Obligations That Require Innovative Design Capabilities, Are Technologically Complex, Require State-Of-The-Art Manufacturing Expertise or Are Dependent Upon Factors Not Wholly Within the Company's Control. Failure to Meet These Obligations Could Adversely Affect the Company's Profitability and Future Prospects.***

The company designs, develops and manufactures technologically advanced and innovative products and services applied by its customers in a variety of environments. Problems and delays in development or delivery as a result of issues with respect to design, technology, licensing and patent rights, labor, learning curve assumptions, or materials and components could prevent the company from achieving contractual requirements.

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In addition, the company's products cannot be tested and proven in all situations and are otherwise subject to unforeseen problems. Examples of unforeseen problems which could negatively affect revenue and profitability include loss on launch of spacecraft, premature failure, problems with quality, country of origin, delivery of subcontractor components or services, and unplanned degradation of product performance. These failures could result, either directly or indirectly, in loss of life or property. Among the factors that may affect revenue and profits could be unforeseen costs and expenses not covered by insurance or indemnification from the customer, diversion of management focus in responding to unforeseen problems, loss of follow-on work, and, in the case of certain contracts, repayment to the government customer of contract cost and fee payments previously received by the company.

Certain contracts, primarily involving space satellite systems, contain provisions that entitle the customer to recover fees in the event of partial or complete failure of the system upon launch or subsequent deployment for less than a specified period of time. Under such terms, the company could be required to forfeit fees previously recognized and/or collected. The company has not experienced any material losses in the last decade in connection with such contract performance incentive provisions. However, if the company were to experience launch failures or complete satellite system failures in the future, such events could have a material adverse impact on the company's consolidated financial position or results of operations.

***n Contract Cost Growth on Fixed-Price and Other Contracts That Cannot Be Justified as an Increase In Contract Value Due From Customers Exposes The Company to Reduced Profitability and the Potential Loss of Future Business.***

Operating income is adversely affected when contract costs that cannot be billed to customers are incurred. This cost growth can occur if estimates to complete increase due to technical challenges or if initial estimates used for calculating the contract cost were incorrect. The cost estimation process requires significant judgment and expertise. Reasons for cost growth may include unavailability and productivity of labor, the nature and complexity of the work to be performed, the effect of change orders, the availability of materials, the effect of any delays in performance, availability and timing of funding from the customer, natural disasters, and the inability to recover any claims included in the estimates to complete. A significant change in cost estimates on one or more programs could have a material effect on the company's consolidated financial position or results of operations.

Due to their nature, fixed-price contracts inherently have more risk than flexibly priced contracts and therefore generally carry higher profit margins. Approximately 30 percent of the company's annual revenues are derived from fixed-price contracts — see Contracts in Part II, Item 7. Flexibly priced contracts may carry risk to the extent of their specific contract terms and conditions relating to performance award fees, including cost sharing agreements, and negative performance incentives. The company typically enters into fixed-price contracts where costs can be reasonably estimated based on experience. In addition, certain contracts other than fixed-price contracts have provisions relating to cost controls and audit rights. Should the terms specified in those contracts not be met, then profitability may be reduced. Fixed-price development work comprises a small portion of the company's fixed-price contracts and inherently has more uncertainty as to future events than production contracts and therefore more variability in estimates of the costs to complete the development stage. As work progresses through the development stage into production, the risks associated with estimating the total costs of the contract are generally reduced. In addition, successful performance of fixed-price development contracts which include production units is subject to the company's ability to control cost growth in meeting production specifications and delivery rates. While management uses its best judgment to estimate costs associated with fixed-price development contracts, future events could result in either upward or downward adjustments to those estimates. Examples of the company's significant fixed-price development contracts include the F-16 Block 60 combat avionics program and the MESA radar system program for

the Wedgetail and Peace Eagle contracts, both of which are performed by the Electronics segment. It is also not unprecedented in the shipbuilding business for the company to

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negotiate fixed-price production follow-on contracts before the development effort has been completed and learning curves fully realized on existing flexibly priced development contracts.

***n The Company Uses Estimates When Accounting for Contracts. Changes In Estimates Could Affect The Company's Profitability and Its Overall Financial Position.***

Contract accounting requires judgment relative to assessing risks, estimating contract revenues and costs, and making assumptions for schedule and technical issues. Due to the size and nature of many of the company's contracts, the estimation of total revenues and costs at completion is complicated and subject to many variables. For example, assumptions have to be made regarding the length of time to complete the contract because costs also include expected increases in wages and prices for materials. Similarly, assumptions have to be made regarding the future impact of company initiated efficiency initiatives and cost reduction efforts. Incentives, awards, or penalties related to performance on contracts are considered in estimating revenue and profit rates, and are recorded when there is sufficient information to assess anticipated performance.

Because of the significance of the judgments and estimation processes described above, it is possible that materially different amounts could be obtained if different assumptions were used or if the underlying circumstances were to change. Changes in underlying assumptions, circumstances or estimates may have a material adverse effect upon future period financial reporting and performance. See Critical Accounting Policies, Estimates, and Judgments in Part II, Item 7.

***n The Company's Operations Are Subject to Numerous Domestic and International Laws, Regulations and Restrictions, and Noncompliance With These Laws, Regulations and Restrictions Could Expose the Company to Fines, Penalties, Suspension or Debarment, Which Could Have a Material Adverse Effect on the Company's Profitability and Its Overall Financial Position.***

The company has thousands of contracts and operations in many parts of the world subject to U.S. and foreign laws and regulations. Prime contracts with various agencies of the U.S. Government and subcontracts with other prime contractors are subject to numerous procurement regulations, including the False Claims Act and the International Traffic in Arms Regulations promulgated under the Arms Export Control Act, with noncompliance found by any one agency possibly resulting in fines, penalties, debarment, or suspension from receiving additional contracts with all U.S. Government agencies. Given the company's dependence on U.S. Government business, suspension or debarment could have a material adverse effect on the company.

In addition, international business subjects the company to numerous U.S. and foreign laws and regulations, including, without limitation, regulations relating to import-export control, technology transfer restrictions, repatriation of earnings, exchange controls, the Foreign Corrupt Practices Act, and the anti-boycott provisions of the U.S. Export Administration Act. Failure by the company or its sales representatives or consultants to comply with these laws and regulations could result in administrative, civil, or criminal liabilities and could, in the extreme case, result in suspension or debarment from government contracts or suspension of the company's export privileges, which could have a material adverse effect on the company. Changes in regulation or political environment may affect the company's ability to conduct business in foreign markets including investment, procurement, and repatriation of earnings.

The company operates in a highly regulated environment and is routinely audited by the U.S. Government and others. On a regular basis, the company monitors its policies and procedures with respect to its contracts to ensure consistent

application under similar terms and conditions and to assess compliance with all applicable government regulations. Negative audit findings could result in termination of a contract, forfeiture of profits, or suspension of payments. From time to time the company is subject to U.S. Government investigations relating to its operations. Government contractors that are found to have violated the law such as the False Claims Act or the Arms Export Control Act, or are indicted or convicted for violations of other federal laws, or are found not to have acted responsibly as defined by the law, may be subject to significant fines. Such convictions could also result in suspension or debarment from government

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contracting for some period of time. Given the company's dependence on government contracting, suspension or debarment could have a material adverse effect on the company.

***n The Company's Business Is Subject to Disruption Caused By Issues With Its Suppliers, Subcontractors, Workforce, Natural Disasters and Other Factors That Could Adversely Affect the Company's Profitability and Its Overall Financial Position.***

The company may be affected by delivery or performance issues with key suppliers and subcontractors, as well as other factors that may cause operating results to be adversely affected. Changes in inventory requirements or other production cost increases may also have a negative effect on the company's consolidated financial position or results of operations.

Performance failures by a subcontractor of the company or difficulty in maintaining complete alignment of the subcontractor's obligations with the company's prime contract obligations may adversely affect the company's ability to perform its obligations on the prime contract, which could reduce the company's profitability due to damages or other costs that may not be fully recoverable from the subcontractor or from the customer and could result in a termination of the prime contract and have an adverse effect on the company's ability to compete for future contracts. If the recent period of adverse economic conditions and credit market volatility continues, the company's profitability may be negatively impacted by the inability of certain of the company's subcontractors and key suppliers to continue providing their products and/or services.

Operating results are heavily dependent upon the company's ability to attract and retain sufficient personnel with requisite skill sets and/or security clearances. The successful negotiation of collective bargaining agreements and avoidance of organized work stoppages are also critical to the ongoing operations of the company.

The company has significant operations located in regions of the U.S. that may be exposed to damaging storms and other natural disasters. While preventative measures typically help to minimize harm to the company, the damage and disruption resulting from certain storms or other natural disasters may be significant. Although no assurances can be made, the company believes it can recover costs associated with natural disasters through insurance or its contracts.

Natural disasters such as storms and earthquakes can disrupt electrical and other power distribution networks and cause adverse effects on profitability and performance, including computer and internet operation and accessibility. Computer viruses and similar harmful software programs, as well as network outages, disruptions and attacks also may have a material adverse effect on the company's profitability and performance unless quarantined or otherwise prevented.

***n Changes In Future Business Conditions Could Cause Business Investments and/or Recorded Goodwill to Become Impaired, Resulting In Substantial Losses and Write-Downs That Would Reduce the Company's Operating Income.***

As part of its overall strategy, the company will, from time to time, acquire a minority or majority interest in a business. These investments are made upon careful target analysis and due diligence procedures designed to achieve a desired return or strategic objective. These procedures often involve certain assumptions and judgment in determining acquisition price. After acquisition, unforeseen issues could arise which adversely affect the anticipated returns or which are otherwise not recoverable as an adjustment to the purchase price. Even after careful integration efforts, actual operating results may vary significantly from initial estimates. Goodwill accounts for approximately half of the

company's recorded total assets. The company evaluates goodwill amounts for impairment annually, or when evidence of potential impairment exists. The annual impairment test is based on several factors requiring judgment. Principally, a significant decrease in expected cash flows or changes in market conditions may indicate potential impairment of recorded goodwill. Adverse equity market conditions and the resulting decline in market multiples and the company's stock price led to a

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non-cash, after-tax charge of \$3.1 billion for impairment of goodwill at Shipbuilding and Space Technology. If the current economic conditions continue to deteriorate causing further decline in the company's stock price, additional impairments to one or more businesses could occur in future periods whether or not connected to the annual impairment analysis. The company will continue to monitor the recoverability of the carrying value of its goodwill and other long-lived assets. See Critical Accounting Policies, Estimates, and Judgments in Part II, Item 7.

- n The Company Is Subject to Various Claims and Litigation That Could Ultimately Be Resolved Against The Company Requiring Material Future Cash Payments and/or Future Material Charges Against the Company's Operating Income and Materially Impairing the Company's Financial Position.***

The size and complexity of the company's business make it highly susceptible to claims and litigation. The company is subject to environmental claims, income tax matters and other litigation, which, if not resolved within established accruals, could have a material adverse effect on the company's consolidated financial position, results of operations, or cash flows. See Legal Proceedings in Part I, Item 3, and Critical Accounting Policies, Estimates, and Judgments in Part II, Item 7.

- n Pension and Medical Expense Associated with the Company's Retirement Benefit Plans May Fluctuate Significantly Depending Upon Changes in Actuarial Assumptions and Future Market Performance of Plan Assets.***

A substantial portion of the company's current and retired employee population is covered by pension and post-retirement benefit plans, the costs of which are dependent upon the company's various assumptions, including estimates of rates of return on benefit related assets, discount rates for future payment obligations, rates of future cost growth and trends for future costs. In addition, funding requirements for benefit obligations of the company's pension and post-retirement benefit plans are subject to legislative and other government regulatory actions. Variances from these estimates could have a material adverse effect on the company's consolidated financial position, results of operations, and cash flows. Recent volatility in the financial markets has resulted in lower than expected returns on the company's pension plan assets, resulting in potentially higher pension costs in future periods.

- n The Company's Insurance Coverage May Be Inadequate to Cover All of Its Significant Risks or Its Insurers May Deny Coverage of Material Losses Incurred By the Company, Which Could Adversely Affect The Company's Profitability and Overall Financial Position.***

The company endeavors to identify and obtain in established markets insurance agreements to cover significant risks and liabilities (including, among others, natural disasters, product liability and business interruption). Not every risk or liability can be protected against by insurance, and, for insurable risks, the limits of coverage reasonably obtainable in the market may not be sufficient to cover all actual losses or liabilities incurred. In some, but not all, circumstances the company may receive indemnification from the U.S. Government. Because of the limitations in overall available coverage referred to above, the company may have to bear substantial costs for uninsured losses that could have an adverse effect upon its consolidated results of operations and its overall consolidated financial position. Additionally, disputes with insurance carriers over coverage may affect the timing of cash flows and, where litigation with the carrier becomes necessary, an outcome unfavorable to the company may have a material adverse effect on the company's consolidated results of operations. See Note 15 to the consolidated financial statements in Part II, Item 8.

- n Current Trends in U.S. Government Procurement May Adversely Affect Cash Flows or Program Profitability.***

The company, like others in the defense industry, is aware of a potential problem presented by strict compliance with the Defense Federal Acquisition Regulation Supplement preference for enumerated specialty metals sourced domestically or from certain foreign countries. Subcontractors and lower-tier suppliers have made disclosures indicating inability to comply with the rule as written. Subject to limitations,

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inability to certify that all enumerated specialty metals in a product comply with sourcing requirements can lead to U.S. Government customers preventing delivery of materiel and products critical to national defense.

- n Current levels of market volatility are unprecedented and adverse capital and credit market conditions may affect the company's ability to access cost-effective sources of funding.***

The capital and credit markets have been experiencing extreme volatility and disruption in late 2008 and early 2009. Historically, the company has occasionally accessed these markets to support certain business activities including acquisitions, capital expansion projects, refinancing existing debt, and issuing letters of credit. In the future, the company may not be able to obtain capital market financing or credit availability on similar terms, or at all, which could have a material adverse effect on the company's consolidated financial position, results of operations, and cash flows.

- n The Company is Subject to Changes in United States and Global Market Conditions That Are Beyond the Company's Control and May Have a Material Effect on the Company's Business and Results of Operations.***

The United States and global economies are currently experiencing a period of substantial economic uncertainty with wide-ranging effects, including the current disruption in global financial markets. Possible effects of these economic events are described in the preceding risk factors, including those relating to U.S. Government defense spending, business disruptions caused by suppliers or subcontractors, impairment of goodwill and other long-lived assets, pension costs and access to capital and credit markets. Although governments worldwide, including the U.S. Government, have initiated sweeping economic plans, the company is unable to predict the impact, severity, and duration of these economic events, which could have a material effect on the company's consolidated financial position, results of operations, or cash flows.

**Item 1B. Unresolved Staff Comments**

The company has no unresolved comments from the SEC.

**FORWARD-LOOKING STATEMENTS AND PROJECTIONS**

Statements in this Form 10-K that are in the future tense, and all statements accompanied by terms such as believe, project, expect, trend, estimate, forecast, assume, intend, plan, target, guidance, anticipate, or variations thereof and similar terms are intended to be forward-looking statements as defined by federal securities law. Forward-looking statements are based upon assumptions, expectations, plans and projections that are believed valid when made, but that are subject to the risks and uncertainties identified under Risk Factors in Part I, Item 1A, that may cause actual results to differ materially from those expressed or implied in the forward-looking statements.

The company intends that all forward-looking statements made will be subject to safe harbor protection of the federal securities laws pursuant to Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934.

Forward-looking statements are based upon, among other things, the company's assumptions with respect to:

- n impact of domestic and global economic uncertainties on financial markets, access to capital, value of goodwill or other assets, and changes in government funding;***

- n future revenues;
- n expected program performance and cash flows;
- n compliance with technical, operational, and quality requirements;
- n returns or losses on pension plan assets and variability of pension actuarial and related assumptions and regulatory requirements;
  
- n the outcome of litigation, claims, appeals, bid protests, and investigations;
- n hurricane-related insurance recoveries;
- n environmental remediation;

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### **NORTHROP GRUMMAN CORPORATION**

- n the success of acquisitions and divestitures of businesses;
- n performance issues with, and financial viability of, joint ventures, and other business arrangements;
- n performance issues with, and financial viability of, key suppliers and subcontractors;
- n product performance and the successful execution of internal plans;
- n successful negotiation of contracts with labor unions;
- n the availability and retention of skilled labor;
- n allowability and allocability of costs under U.S. Government contracts;
- n effective tax rates and timing and amounts of tax payments;
- n the results of any audit or appeal process with the Internal Revenue Service; and
- n anticipated costs of capital investments.

You should consider the limitations on, and risks associated with, forward-looking statements and not unduly rely on the accuracy of predictions contained in such forward-looking statements. As noted above, these forward-looking statements speak only as of the date when they are made. The company does not undertake any obligation to update forward-looking statements to reflect events, circumstances, changes in expectations, or the occurrence of unanticipated events after the date of those statements. Moreover, in the future, the company, through senior management, may make forward-looking statements that involve the risk factors and other matters described in this Form 10-K as well as other risk factors subsequently identified, including, among others, those identified in the company's filings with the SEC on Form 10-Q and Form 8-K.

### **Item 2. Properties**

At December 31, 2008, the company had approximately 57 million square feet of floor space at approximately 526 separate locations, primarily in the U.S., for manufacturing, warehousing, research and testing, administration and various other uses. At December 31, 2008, the company leased to third parties approximately 696,000 square feet of its owned and leased facilities, and had vacant floor space of approximately 648,000 square feet.

At December 31, 2008, the company had major operations at the following locations:

**Information & Services** Huntsville, AL; Carson, McClellan, Rancho Carmel, Redondo Beach, San Diego, and San Jose, CA; Aurora and Colorado Springs CO; Washington D.C.; Warner Robins, GA; Lake Charles, LA; Elkridge and Columbia, MD; and Chantilly, Chester, Fairfax, Herndon, McLean, and Reston, VA.

**Aerospace** Carson, El Segundo, Manhattan Beach, Mojave, Palmdale, Redondo Beach, and San Diego, CA; Melbourne and St. Augustine, FL; Bethpage, NY; and Clearfield, UT.

**Electronics** Huntsville, AL; Azusa, Sunnyvale and Woodland Hills, CA; Norwalk, CT; Apopka, FL; Rolling Meadows, IL; Annapolis, Baltimore, Elkridge, Hagerstown, Linthicum and Sykesville, MD; Williamsville, NY; Cincinnati, OH; Salt Lake City, UT; and Charlottesville, VA. Locations outside the U.S. include France, Germany, and Italy.

**Shipbuilding** Avondale, Harahan, New Orleans and Tallulah, LA; Gulfport and Pascagoula, MS; and Hampton, Newport News, and Suffolk, VA.

**Corporate and other locations** Los Angeles, CA; Irving, TX; York, PA; and Arlington, VA. Locations outside the U.S. include the United Kingdom and Canada.



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The following is a summary of the company's floor space at December 31, 2008:

<i>Square feet (In thousands)</i>	Owned	Leased	U.S. Government Owned/Leased	<b>Total</b>
Information & Services	841	12,534	62	<b>13,437</b>
Aerospace	6,747	4,713	2,023	<b>13,483</b>
Electronics	8,091	3,723		<b>11,814</b>
Shipbuilding	13,144	4,028	197	<b>17,369</b>
Corporate	629	599		<b>1,228</b>
<b>Total</b>	<b>29,452</b>	<b>25,597</b>	<b>2,282</b>	<b>57,331</b>

The company believes its properties are well maintained and in good operating condition and that the productive capacity of the company's properties is adequate to meet current contractual requirements and those for the foreseeable future.

**Item 3. Legal Proceedings**

*U.S. Government Investigations and Claims* Departments and agencies of the U.S. Government have the authority to investigate various transactions and operations of the company, and the results of such investigations may lead to administrative, civil or criminal proceedings, the ultimate outcome of which could be fines, penalties, repayments or compensatory or treble damages. U.S. Government regulations provide that certain findings against a contractor may lead to suspension or debarment from future U.S. Government contracts or the loss of export privileges for a company or an operating division or subdivision. Suspension or debarment could have a material adverse effect on the company because of its reliance on government contracts.

As previously disclosed, in October 2005, the U.S. Department of Justice and a restricted U.S. Government customer apprised the company of potential substantial claims relating to certain microelectronic parts produced by the Space and Electronics Sector of former TRW Inc., now a part of the company. In the third quarter of 2006, the company proposed to settle the claims and any associated matters and recognized a pre-tax charge of \$112.5 million to cover the cost of the settlement proposal and associated investigative costs. The U.S. Government has advised the company that if continuing settlement discussions are not successful it will pursue its claims through litigation. On November 26, 2008, the U.S. Department of Justice filed a Notice of Intervention in a False Claims Act case that remains under seal in the U.S. District Court for the Central District of California. Because of the highly technical nature of the issues involved and their restricted status, because of the significant disagreement of the company with the allegations of the underlying qui tam complaint, and because of the significant disagreement between the company and the U.S. Government as to the U.S. Government's theories of liability and damages (including a material difference between the U.S. Government's damage theories and the company's offer), final resolution of this matter could take a considerable amount of time, particularly if litigation should ensue. If the U.S. Government were to be ultimately successful on its theories of liability and damages, which could be trebled under the Federal False Claims Act, the effect upon the company's consolidated financial position, results of operations, and cash flows would materially exceed the amount provided by the company. Based upon the information available to the company to date, the company believes that it has substantive defenses but can give no assurance that its views will prevail. Accordingly, the ultimate disposition of this matter cannot presently be determined.

As previously disclosed, in the second quarter of 2007, the U.S. Coast Guard issued a revocation of acceptance under the Deepwater Program for eight converted 123-foot patrol boats (the vessels) based on alleged hull buckling and shaft alignment problems and alleged nonconforming topside equipment on the vessels. The company submitted a written response that argued that the revocation of acceptance was improper, and in late December 2007, the Coast Guard advised Integrated Coast Guard Systems (the contractors joint venture for performing the Deepwater Program) that the Coast Guard is seeking \$96.1 million from the Joint Venture as a

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result of the revocation of acceptance of the eight vessels delivered under the 123-foot conversion program. The majority of the costs associated with the 123-foot conversion effort are associated with the alleged structural deficiencies of the vessels, which were converted under contracts with the company and a subcontractor to the company. In May 2008, the Coast Guard advised the Joint Venture that the Coast Guard would support an investigation by the U.S. Department of Justice of the Joint Venture and its subcontractors instead of pursuing its \$96.1 million claim independently. The Department of Justice had previously issued subpoenas related to the Deepwater Program, pursuant to which the company has provided responsive documents. The company recently learned that a civil False Claims Act complaint naming it as a defendant was filed under seal. The relationship between the allegations in the complaint and the U.S. Department of Justice's investigation is unclear to the company. Based upon the information available to the company to date, the company believes that it has substantive defenses to any potential claims but can give no assurance that its views will prevail.

In August 2008, the company disclosed to the Antitrust Division of the U.S. Department of Justice possible violations of federal antitrust laws in connection with the bidding process for certain maintenance contracts at a military installation in California. In February 2009, the company and the Department of Justice signed an agreement admitting the company into the Corporate Leniency Program. As a result of the company's acceptance into the Program, the company will be exempt from federal criminal prosecution and criminal fines relating to the matters the company reported to the Department of Justice if the company complies with certain conditions, including its continued cooperation with the government's investigation and its agreement to make restitution if the government was harmed by the violations.

Based upon the available information regarding matters that are subject to U.S. Government investigations, other than as set out above, the company believes, but can give no assurance, that the outcome of any such matters would not have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

*Litigation* Various claims and legal proceedings arise in the ordinary course of business and are pending against the company and its properties. Based upon the information available, the company believes that the resolution of any of these various claims and legal proceedings would not have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

As previously disclosed, the U.S. District Court for the Central District of California consolidated two separately filed Employee Retirement Income Security Act (ERISA) lawsuits, which the plaintiffs seek to have certified as class actions, into the In Re Northrop Grumman Corporation ERISA Litigation. On August 7, 2007, the Court denied plaintiffs' motion for class certification, and the plaintiffs appealed the Court's decision on class certification to the U.S. Court of Appeals for the Ninth Circuit. On October 11, 2007, the Ninth Circuit granted appellate review, which delayed the commencement of trial previously scheduled to begin January 22, 2008. The company believes that the outcome of these matters would not have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

**Other Matters**

In the event of contract termination for the government's convenience, contractors are normally protected by provisions covering reimbursement for costs incurred under the contract. As previously disclosed, the company received a termination for convenience notice on the Tri-Service Standoff Attack Missile (TSSAM) program in 1995. In December 1996, the company filed a lawsuit against the U.S. Government in the U.S. Court of Federal Claims seeking the recovery of approximately \$750 million for uncompensated performance costs, investments and a reasonable profit on the program. Prior to 1996, the company had charged to operations in excess of \$600 million

related to this program. The company is unable to predict whether it will realize some or all of its TSSAM claims, none of which are recorded on its consolidated statement of financial position.

As previously disclosed, the company is pursuing legal action against an insurance provider arising out of a disagreement concerning the coverage of certain losses related to Hurricane Katrina (see Note 15 to the consolidated financial statements in Part II, Item 8). The company commenced the action against Factory Mutual Insurance Company (FM Global) on November 4, 2005, which is now pending in the U.S. District Court for



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the Central District of California, Western Division. In August 2007, the district court issued an order finding that the excess insurance policy provided coverage for the company's Katrina-related loss. In November 2007, FM Global filed a notice of appeal of the district court's order. On August 14, 2008, the U.S. Court of Appeals for the Ninth Circuit reversed the earlier summary judgment order in favor of the company, holding that the FM Global excess policy unambiguously excludes damage from the storm surge caused by Hurricane Katrina under its Flood exclusion. The Court of Appeals remanded the case to the district court to determine whether the California efficient proximate cause doctrine affords the company coverage under the policy even if the Flood exclusion of the policy is unambiguous. The company filed a Petition for Rehearing En Banc, or in the Alternative, For Panel Rehearing with the Court of Appeals on August 27, 2008. On January 6, 2009, the Court of Appeals ordered FM Global to respond to the Petition for Rehearing by January 30, 2009. FM Global filed its opposition to the Petition for Rehearing and the company now awaits the Court of Appeal's decision. Based on the current status of the assessment and claim process, no assurances can be made as to the ultimate outcome of this matter.

**Item 4. Submission of Matters to a Vote of Security Holders**

No items were submitted to a vote of security holders during the fourth quarter of 2008.

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**PART II**

**Item 5.**

**Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

*(a) Market Information.*

The company's common stock is listed on the New York Stock Exchange.

The following table sets forth, for the periods indicated, the high and low closing sale prices of the company's common stock as reported in the consolidated reporting system for the New York Stock Exchange Composite Transactions:

	<b>2008</b>			<b>2007</b>	
January to March	<b>\$ 82.57</b>	<b>to</b>	<b>\$ 76.41</b>	\$ 75.72	to \$ 66.95
April to June	<b>\$ 79.12</b>	<b>to</b>	<b>\$ 66.53</b>	\$ 77.87	to \$ 72.68
July to September	<b>\$ 71.68</b>	<b>to</b>	<b>\$ 60.54</b>	\$ 79.86	to \$ 74.67
October to December	<b>\$ 56.86</b>	<b>to</b>	<b>\$ 34.20</b>	\$ 84.48	to \$ 77.09

*(b) Holders.*

The approximate number of common shareholders was 35,269 as of February 6, 2009.

*(c) Dividends.*

Quarterly dividends per common share for the most recent two years are as follows:

	<b>2008</b>	<b>2007</b>
January to March	<b>\$ 0.37</b>	\$ 0.37
April to June	<b>0.40</b>	0.37
July to September	<b>0.40</b>	0.37
October to December	<b>0.40</b>	0.37
	<b>\$ 1.57</b>	\$ 1.48

The quarterly dividend paid to the holders of the mandatorily redeemable preferred shares was \$1.75 per share for the first quarter of 2008 and each quarter in 2007.

**Common Stock**

The company has 800,000,000 shares authorized at a \$1 par value per share, of which 327,012,663 and 337,834,561 shares were outstanding as of December 31, 2008 and 2007, respectively.

### **Preferred Stock**

The company had 10,000,000 mandatorily redeemable shares authorized with a liquidation value of \$100 per share, of which zero and 3.5 million shares (designated as Series B Convertible Preferred Stock) were issued and outstanding as of December 31, 2008 and 2007, respectively.

On February 20, 2008, the company's Board of Directors approved the redemption of the 3.5 million shares of Series B Convertible Preferred Stock on April 4, 2008. Prior to the redemption date, substantially all of the preferred shares were converted into common stock at the election of shareholders. All remaining non-converted shares were redeemed by the company on the redemption date. As a result of the conversion and redemption the company issued approximately 6.4 million shares of common stock.

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(d) *Annual Meeting of Stockholders.*

The Annual Meeting of Stockholders of Northrop Grumman Corporation will be held on May 20, 2009, at the Space Technology Presentation Center, One Space Park, Redondo Beach, California 90278.

(e) *Stock Performance Graph.*

**COMPARISON OF FIVE-YEAR CUMULATIVE TOTAL RETURN  
AMONG NORTHROP GRUMMAN CORPORATION, S&P 500 INDEX  
AND S&P AEROSPACE/DEFENSE INDEX**

- (1) Assumes \$100 invested at the close of business on December 31, 2003, in Northrop Grumman Corporation common stock, Standard & Poor's (S&P) 500 Index, and the S&P Aerospace/Defense Index.
- (2) The cumulative total return assumes reinvestment of dividends.
- (3) The S&P Aerospace/Defense Index is comprised of The Boeing Company, General Dynamics Corporation, Goodrich Corporation, Honeywell International Inc., L-3 Communications, Lockheed Martin Corporation, Northrop Grumman Corporation, Precision Castparts Corp., Raytheon Company, Rockwell Collins, Inc., and United Technologies Corporation.
- (4) The total return is weighted according to market capitalization of each company at the beginning of each year.

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The table below summarizes the company's repurchases of common stock during the three months ended December 31, 2008.

Period	Total Number of Shares Purchased <sup>(1)</sup>	Average Price Paid per Share	Total Numbers of Shares Purchased as of Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
October 1 through October 31, 2008	285,840	\$ 62.47	285,840	\$ 945 million
November 1 through November 30, 2008				
December 1 through December 31, 2008				
<b>Total</b>	<b>285,840</b>	<b>\$ 62.47</b>	<b>285,840</b>	<b>\$ 945 million<sup>(1)</sup></b>

(1) On December 19, 2007, the company's Board of Directors authorized a share repurchase program of up to \$2.5 billion of its outstanding common stock. As of December 31, 2008, the company has \$945 million authorized for share repurchases.

Share repurchases take place at management's discretion or under pre-established non-discretionary programs from time to time, depending on market conditions, in the open market, and in privately negotiated transactions. The company retires its common stock upon repurchase and has not made any purchases of common stock other than in connection with these publicly announced repurchase programs.

*(g) Securities Authorized for Issuance Under Equity Compensation Plans.*

For a description of securities authorized under the company's equity compensation plans, see Note 18 of the consolidated financial statements in Part II, Item 8.

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The data presented in the following table is derived from the audited financial statements and other company information adjusted to reflect the current application of discontinued operations. See also Business Acquisitions and Business Dispositions in Part II, Item 7.

**Selected Financial Data**

<i>\$ in millions except per share</i>	<b>2008</b>	Year Ended December 31			
		2007	2006	2005	2004
Sales and Service Revenues					
United States Government	\$ <b>30,892</b>	\$ 28,848	\$ 27,242	\$ 27,253	\$ 26,268
Other customers	<b>2,995</b>	2,980	2,749	2,611	2,496
Total revenues	\$ <b>33,887</b>	\$ 31,828	\$ 29,991	\$ 29,864	\$ 28,764
Goodwill Impairment	\$ <b>(3,060)</b>				
Operating (loss) income	<b>(111)</b>	\$ 3,018	\$ 2,494	\$ 2,227	\$ 1,987
(Loss) earnings from continuing operations	<b>(1,281)</b>	1,811	1,593	1,413	1,080
Basic (loss) earnings per share, from continuing operations	\$ <b>(3.83)</b>	\$ 5.30	\$ 4.61	\$ 3.96	\$ 3.00
Diluted (loss) earnings per share, from continuing operations	<b>(3.83)</b>	5.18	4.51	3.89	2.96
Cash dividends declared per common share	<b>1.57</b>	1.48	1.16	1.01	.89
<b>Year-End Financial Position</b>					
Total assets	\$ <b>30,197</b>	\$ 33,373	\$ 32,009	\$ 34,214	\$ 33,303
Notes payable to banks and long-term debt	<b>3,944</b>	4,055	4,162	5,145	5,158
Total long-term obligations and preferred stock	<b>10,853</b>	9,254	8,641	9,412	10,438
<b>Financial Metrics</b>					
Free cash flow <sup>(1)</sup>	\$ <b>2,420</b>	\$ 2,071	\$ 947	\$ 1,811	\$ 1,266
Net working capital (deficit)	<b>(235)</b>	365	(4)	(397)	707
Current ratio	<b>0.97 to 1</b>	1.06 to 1	1.00 to 1	.95 to 1	1.11 to 1
Notes payable to banks and long-term debt as a percentage of shareholders equity	<b>33.1%</b>	22.9%	25.0%	30.6%	30.9%

**Other Information**

Company-sponsored research and development expenses	\$ 576	\$ 534	\$ 569	\$ 533	\$ 501
Maintenance and repairs	440	335	358	428	394
Payroll and employee benefits	13,665	12,888	12,455	12,140	12,398
Number of employees at year-end	123,600	121,700	121,400	122,800	124,600

(1) Free cash flow is calculated as net cash provided by continuing operations less capital expenditures and outsourcing contract and related software costs. See Liquidity and Capital Resources Free Cash Flow in Part II, Item 7 for more information on this measure.

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**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

**OVERVIEW**

**Business**

Northrop Grumman provides technologically advanced, innovative products, services, and integrated solutions in information and services, aerospace, electronics, and shipbuilding to its global customers. As a prime contractor, principal subcontractor, partner, or preferred supplier, Northrop Grumman participates in many high-priority defense and commercial technology programs in the U.S. and abroad. Northrop Grumman conducts most of its business with the U.S. Government, principally the DoD. The company also conducts business with local, state, and foreign governments and has domestic and international commercial sales.

**Notable Events**

Certain notable events or activity affecting the company's 2008 consolidated financial results included the following:

*Financial highlights*

- n Sales increased 6 percent to a record \$33.9 billion.
- n Cash from operations increased to a record \$3.2 billion after \$200 million pension pre-funding.
- n Total backlog at a record \$78.1 billion, driven by record contract awards of \$48.3 billion.
- n Share repurchases totaled \$1.6 billion.

*Notable events*

- n Non-cash, after-tax charge of \$3.1 billion for impairment of goodwill at Shipbuilding and Space Technology, primarily caused by the effects of adverse equity market conditions that caused a decrease in market multiples and the company's stock price at November 30, 2008.
- n Pre-tax charge of \$326 million in the first quarter of 2008 associated with the LHD-8 and other ships, of which \$63 million was reversed in the second half of 2008 – see Note 7 to the consolidated financial statements in Part II, Item 8.
- n Increased quarterly common stock dividend from \$.37 to \$.40 per share beginning in the second quarter of 2008.
- n Contract award of \$1.2 billion by U.S. Navy for a BAMS Unmanned Aircraft System.
- n Pension plan assets negative return of approximately 16% contributing to \$4.5 billion pre-tax loss in accumulated other comprehensive loss – see page 34
- n Conversion and redemption of 3.5 million shares of mandatorily redeemable convertible preferred stock in exchange for 6.4 million shares of common stock – see Note 8 to the consolidated financial statements in Part II, Item 8.

**Outlook**

The United States and global economies are currently undergoing a period of substantial economic uncertainty, and the related financial markets are experiencing unprecedented volatility. If the future economic environment continues to be less favorable than it has been in recent years, the company could experience difficulties if the financial viability



of certain of its subcontractors and key suppliers is impaired. In addition, the volatility in the financial markets has affected the valuation of the company's pension assets, resulting in higher pension costs in future periods. Adverse equity market conditions and the resulting decline in market multiples and the company's stock price have led to a non-cash, after-tax charge of \$3.1 billion for impairment of goodwill at Shipbuilding and Space Technology. If the financial markets continue to deteriorate causing further decline in the company's stock price and market capitalization, further impairments of goodwill and other long-lived assets may become necessary.

The company's business is conducted primarily with U.S. Government customers under long-term contracts and there have been no material changes to the company's product and service offerings due to the current economic conditions. The U.S. Government's budgetary processes give the company good visibility regarding future

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spending and the threat areas that they are addressing. Management believes that the company's current contracts, and its strong backlog of previously awarded contracts are well aligned with the direction of its customer's future needs, and this provides the company with good insight regarding future cash flows from its businesses. Nonetheless, management recognizes that no business is completely immune to the current economic situation and these economic conditions and the transition to a new presidential administration could adversely affect future defense spending levels which could lead to lower than expected revenues for the company in future years. Certain programs in which the company participates may be subject to potential reductions due to a slower rate of growth in the U.S. Defense Budget forecasts and funds being utilized to support the on-going Global War on Terrorism.

Despite the trend of slower growth rates in the U.S. defense budget, the company believes that its portfolio of technologically advanced, innovative products, services, and integrated solutions will generate revenue growth in 2009 and beyond. Based on total backlog (funded and unfunded) of approximately \$78 billion as of December 31, 2008, the company expects sales in 2009 of approximately \$34.5 billion. The major industry and economic factors that may affect the company's future performance are described in the following paragraphs.

**Industry Factors**

Northrop Grumman is subject to the unique characteristics of the U.S. defense industry as a monopsony, and by certain elements peculiar to its own business mix. Northrop Grumman, along with Lockheed Martin Corporation, The Boeing Company, Raytheon Company, and General Dynamics Corporation are among the largest companies in the U.S. defense industry at this time. Northrop Grumman competes against these and other companies for a number of programs, both large and small. Intense competition and long operating cycles are both key characteristics of Northrop Grumman's business and the defense industry. It is common in this industry for work on major programs to be shared among a number of companies. A company competing to be a prime contractor may, upon ultimate award of the contract to another party, turn out to be a subcontractor for the ultimate prime contracting party. It is not uncommon to compete for a contract award with a peer company and simultaneously perform as a supplier to or a customer of such competitor on other contracts. The nature of major defense programs, conducted under binding contracts, allows companies that perform well to benefit from a level of program continuity not common in many industries.

The company's success in the competitive defense industry depends upon its ability to develop and market its products and services, as well as its ability to provide the people, technologies, facilities, equipment, and financial capacity needed to deliver those products and services with maximum efficiency. It is necessary to maintain, as the company has, sources for raw materials, fabricated parts, electronic components, and major subassemblies. In this manufacturing and systems integration environment, effective oversight of subcontractors and suppliers is as vital to success as managing internal operations.

Similarly, there is intense competition among many companies in the information and services markets which is generally more labor intensive with competitive margin rates over contract periods of shorter duration. Competitors in the information and services markets include the defense industry participants mentioned above as well as many other large and small entities with expertise in various specialized areas. The company's ability to successfully compete in the information and services markets depends on a number of factors; most important is the capability to deploy skilled professionals, many requiring security clearances, at competitive prices across the diverse spectrum of these markets. Accordingly, various workforce initiatives are in place to ensure the company is successful in attracting, developing and retaining sufficient resources to maintain or improve its competitive position within these markets.

*Liquidity Trends* In light of the current economic situation, the company has also evaluated its future liquidity needs, both from a short-term and long-term basis. The company believes that cash on hand plus cash generated from

operations along with cash available under credit lines are expected to be sufficient in 2009 to service debt, finance capital expansion projects, pay federal, foreign, and state income taxes, fund pension and other post-retirement benefit plans, and continue paying dividends to shareholders. The company has a committed

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\$2 billion revolving credit facility, with a maturity date of August 10, 2012, that can be accessed on a same-day basis.

To provide for long-term liquidity, the company believes it can obtain additional capital, if necessary, from such sources as the public or private capital markets, the sale of assets, sale and leaseback of operating assets, and leasing rather than purchasing new assets. The company has an effective shelf registration on file with the SEC.

*Recent Developments in U.S. Cost Accounting Standards (CAS) Pension Recovery Rules* On September 2, 2008, the CAS Board published an Advance Notice of Proposed Rulemaking (ANPRM) that if adopted would provide a framework to partially harmonize the CAS rules with the Pension Protection Act of 2006 (PPA) requirements. The proposed CAS rule includes provisions for a transition period from the existing CAS requirement to a partially harmonized CAS requirement. After the PPA effective date for eligible government contractors (including Northrop Grumman), which were granted a delay in their PPA effective date, the proposed rule would partially mitigate the near-term mismatch between PPA-amended ERISA minimum contribution requirements which would not yet be recoverable under CAS. However, unless the final rule is revised, government contractors maintaining defined benefit pension plans in general would still experience a timing mismatch between required contributions and the CAS recoverable pension costs. It is anticipated that contractors will be entitled to seek an equitable adjustment to prices of previously negotiated contracts subject to CAS for increased contract costs which result from mandatory changes required by the final rule. The CAS Board is required to issue its final rule no later than January 1, 2010.

**Economic Opportunities, Challenges, and Risks**

The defense of the U.S. and its allies requires the ability to respond to one or more regional conflicts, terrorist acts, or threats to homeland security and is increasingly dependent upon early threat identification. National responses to those threats may require unilateral or cooperative initiatives ranging from dissuasion, deterrence, active defense, security and stability operations, or peacekeeping. The company believes that the U.S. Government will continue to place a high priority on the protection of its engaged forces and citizenry and on minimizing collateral damage when force must be applied in pursuit of national objectives. As a result, the U.S. and its military coalitions increasingly rely on sophisticated systems providing long-range surveillance and intelligence, battle management, and precision strike capabilities combined with the ability to rapidly deploy effective force to any region. Accordingly, defense procurement spending is expected to be weighted toward the development and procurement of military platforms and systems demonstrating the stealth, long-range, survivability, persistence and standoff capabilities that can overcome such obstacles to access. Additionally, advanced electronics and software that enhance the capabilities of individual systems and provide for the real-time integration of individual surveillance, information management, strike, and battle management platforms will also be required.

While the upward trend in overall defense spending may slow, the company does not expect defense requirements to change significantly in the foreseeable future. Many allied countries are focusing their development and procurement efforts on advanced electronics and information systems capabilities to enhance their interoperability with U.S. forces. The size of future U.S. and international defense budgets is expected to remain responsive to the international security environment. While the political environment currently does not allow for a thorough insight into the fiscal 2010 budget, it is expected defense spending will continue to grow in the near term, though probably more modestly than in the past. It is possible the new Administration's proposed budget will include reductions in certain programs in which the company participates or for which the company expects to compete, however the company believes that spending on recapitalization and modernization of homeland security and defense assets will continue to be a national priority, with particular emphasis on areas involving intelligence, persistent surveillance, cyber space, energy-saving technologies and non-conventional warfare capabilities.

U.S. Government programs in which the company either participates, or strives to participate, must compete with other programs for consideration during the U.S. budget formulation and appropriation processes. Budget

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decisions made in this environment will have long-term consequences for the size and structure of the company and the entire defense industry.

Substantial new competitive opportunities for the company include the next-generation long-range bomber, space radar, unmanned vehicles, satellite communications systems, restricted programs, technical services and information technology contracts, and numerous international and homeland security programs. In pursuit of these opportunities, Northrop Grumman continues to focus on operational and financial performance for continued growth in 2010 and beyond.

Northrop Grumman has historically concentrated its efforts in high technology areas such as stealth, airborne and space surveillance, battle management, systems integration, defense electronics, and information technology. The company has a significant presence in federal and civil information systems; the manufacture of combatant ships including aircraft carriers and submarines; space technology; C4ISR; and missile systems. The company believes that its programs are a high priority for national defense. Nevertheless, under budgetary pressures, there remains the possibility that one or more of them may be reduced, extended, or terminated by the company's U.S. Government customers.

The company provides certain product warranties that require repair or replacement of non-conforming items for a specified period of time. Most of the company's product warranties are provided under government contracts, the costs of which are generally incorporated into contract pricing.

Prime contracts with various agencies of the U.S. Government and subcontracts with other prime contractors are subject to numerous procurement regulations, including the False Claims Act and the International Traffic in Arms Regulations promulgated under the Arms Export Control Act, with noncompliance found by any one agency possibly resulting in fines, penalties, debarment, or suspension from receiving additional contracts with all U.S. Government agencies. Given the company's dependence on U.S. Government business, suspension or debarment could have a material adverse effect on the company.

See Risk Factors located in Part I, Item 1A for a more complete description of risks faced by the company and the defense industry.

**BUSINESS ACQUISITIONS**

**2008** In October 2008, the company acquired 3001 International, Inc. (3001) for approximately \$92 million in cash. 3001 provides geospatial data production and analysis, including airborne imaging, surveying, mapping and geographic information systems for U.S. and international government intelligence, defense and civilian customers. The operating results of 3001 are reported in the Information Technology segment from the date of acquisition. The consolidated financial statements reflect preliminary estimates of the fair value of the assets acquired and liabilities assumed and the related allocation of the purchase price for the entities acquired. Management does not expect adjustments to these estimates, if any, to have a material effect on the company's consolidated financial position or results of operations.

**2007** During the third quarter of 2007, the company acquired Xinetics Inc., reported in the Space Technology segment, and the remaining 61 percent of Scaled Composites, LLC, reported in the Integrated Systems segment, for an aggregate amount of approximately \$100 million in cash.

In July 2007, the company and Science Applications International Corporation (SAIC) reorganized the AMSEC, LLC joint venture (AMSEC), by dividing AMSEC along customer and product lines. AMSEC is a full-service supplier that provides engineering, logistics and technical support services primarily to Navy ship and aviation programs. Under the reorganization plan, the company retained the ship engineering, logistics and technical service businesses under the AMSEC name (the AMSEC Businesses) and, in exchange, SAIC received the aviation, combat systems and strike force integration services businesses from AMSEC (the Divested Businesses). This reorganization was treated as a step acquisition for the acquisition of SAIC's interests in the AMSEC Businesses, with the company recognizing a pre-tax gain of \$23 million for the effective sale of its interests in the

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Divested Businesses. From the date of this reorganization, the operating results of the AMSEC Businesses, and transaction gain, have been reported on a consolidated basis in the Shipbuilding segment. Prior to the reorganization, the company accounted for AMSEC, LLC under the equity method.

In January 2007, the company acquired Essex Corporation (Essex) for approximately \$590 million in cash, including the assumption of debt totaling \$23 million. Essex provides signal processing services and products, and advanced optoelectronic imaging for U.S. government intelligence and defense customers. The operating results of Essex are reported in the Mission Systems segment.

2006 There were no significant acquisitions during 2006.

**BUSINESS DISPOSITIONS**

2008 In April 2008, the company sold its Electro-Optical Systems (EOS) business for \$175 million in cash to L-3 Communications Corporation and recognized a gain of \$19 million, net of taxes of \$39 million. EOS, formerly a part of the Electronics segment, produces night vision and applied optics products. Sales for this business in the years ended December 31, 2008, 2007, and 2006, were approximately \$53 million, \$190 million, and \$122 million, respectively. Operating results of this business are reported as discontinued operations in the consolidated statements of operations and comprehensive (loss) income for all periods presented.

2007 During the second quarter of 2007, management announced its decision to exit the remaining Interconnect Technologies (ITD) business reported within the Electronics segment. Sales for this business in the years ended December 31, 2007 and 2006, were \$14 million and \$35 million, respectively. The shut-down was completed during the third quarter of 2007 and costs associated with the shut-down were not material. The results of this business are reported as discontinued operations in the consolidated statements of operations and comprehensive (loss) income for all periods presented.

2006 During the second quarter of 2006, the Enterprise Information Technology (EIT) business, formerly reported in the Information Technology segment, was shut down and costs associated with the exit activities were not material. The results of operations of this business are reported as discontinued operations in the consolidated statements of operations and comprehensive (loss) income for all periods presented.

The company sold the assembly business unit of ITD during the first quarter of 2006 and Winchester Electronics (Winchester) during the second quarter of 2006 for net cash proceeds of \$26 million and \$17 million, respectively, and recognized after-tax gains of \$4 million and \$2 million, respectively, in discontinued operations. Each of these business units was associated with the Electronics segment. The results of operations of the assembly business unit of ITD are reported as discontinued operations in the consolidated statements of operations and comprehensive (loss) income. The results of operations of Winchester were not material to any of the periods presented and have therefore not been reclassified as discontinued operations.

**CONTRACTS**

The majority of the company's business is generated from long-term government contracts for development, production, and service activities. Government contracts typically include the following cost elements: direct material, labor and subcontracting costs, and certain indirect costs including allowable general and administrative costs. Unless otherwise specified in a contract, costs billed to contracts with the U.S. Government are determined under the



requirements of the Federal Acquisition Regulation (FAR) and Cost Accounting Standards (CAS) regulations as allowable and allocable costs. Examples of costs incurred by the company and not billed to the U.S. Government in accordance with the requirements of the FAR and CAS regulations include, but are not limited to, certain legal costs, lobbying costs, charitable donations, and advertising costs.

The company's long-term contracts typically fall into one of two broad categories:

*Flexibly Priced Contracts* Includes both cost-type and fixed-price incentive contracts. Cost-type contracts provide for reimbursement of the contractor's allowable costs incurred plus a fee that represents profit. Cost-type

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contracts generally require that the contractor use its best efforts to accomplish the scope of the work within some specified time and some stated dollar limitation. Fixed-price incentive contracts also provide for reimbursement of the contractor's allowable costs, but are subject to a cost-share limit which affects profitability. Fixed-price incentive contracts effectively become firm fixed-price contracts once the cost-share limit is reached.

***Firm Fixed-Price Contracts*** A firm fixed-price contract is a contract in which the specified scope of work is agreed to for a price that is a pre-determined, negotiated amount and not generally subject to adjustment regardless of costs incurred by the contractor. Time-and-materials contracts are considered firm fixed-price contracts as they specify a fixed hourly rate for each labor hour charged.

The following table summarizes 2008 revenue recognized by contract type and customer:

(\$ in millions)	U.S. Government	Other Customers	Total	Percent of Total
Flexibly priced	\$ 22,534	\$ 184	\$ 22,718	67%
Firm fixed-price	8,358	2,811	11,169	33%
Total	\$ 30,892	\$ 2,995	\$ 33,887	100%

***Contract Fees*** Negotiated contract fee structures, for both flexibly priced and fixed-price contracts include, but are not limited to: fixed-fee amounts, cost sharing arrangements to reward or penalize for either under or over cost target performance, positive award fees, and negative penalty arrangements. Profit margins may vary materially depending on the negotiated contract fee arrangements, percentage-of-completion of the contract, the achievement of performance objectives, and the stage of performance at which the right to receive fees, particularly under incentive and award fee contracts, is finally determined.

***Positive Award Fees*** Certain contracts contain provisions consisting of award fees based on performance criteria such as: cost, schedule, quality, and technical performance. Award fees are determined and earned based on an evaluation by the customer of the company's performance against such negotiated criteria. Fees that can be reasonably assured and reasonably estimated are recorded over the performance period of the contract. Award fee contracts are widely used throughout the company's operating segments. Examples of significant long-term contracts with substantial negotiated award fee amounts are the KEI, F-35 SDD, Global Hawk Engineering and Manufacturing Development (EMD), LPD, DDG-1000 programs and the majority of satellite contracts.

***Compliance and Monitoring*** On a regular basis, the company monitors its policies and procedures with respect to its contracts to ensure consistent application under similar terms and conditions as well as compliance with all applicable government regulations. In addition, costs incurred and allocated to contracts with the U.S. Government are routinely audited by the Defense Contract Audit Agency.

**CRITICAL ACCOUNTING POLICIES, ESTIMATES, AND JUDGMENTS****Revenue Recognition**

***Overview*** The majority of the company's business is derived from long-term contracts for the construction of facilities, production of goods, and services provided to the federal government, which are accounted for under the

provisions of Accounting Research Bulletin No. 45 *Accounting for Long-Term Construction-Type Contracts*, American Institute of Certified Public Accountants (AICPA) Statement of Position (SOP) No. 81-1 *Accounting for Performance of Construction-Type and Certain Production-Type Contracts*, and the AICPA Audit and Accounting Guide, *Audits of Federal Government Contractors*. The company classifies contract revenues as product sales or service revenues depending on the predominant attributes of the relevant underlying contracts. The company also enters into contracts that are not associated with the federal government, such as contracts to provide certain services to non-federal government customers. The company accounts for those contracts in accordance with the SEC's Staff Accounting Bulletin No. 104, *Revenue Recognition*, and other relevant revenue recognition accounting literature.

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The company considers the nature of these contracts and the types of products and services provided when it determines the proper accounting method for a particular contract.

*Percentage-of-Completion Accounting* The company generally recognizes revenues from its long-term contracts under the cost-to-cost and the units-of-delivery measures of the percentage-of-completion method of accounting. The percentage-of-completion method recognizes income as work on a contract progresses. For most contracts, sales are calculated based on the percentage of total costs incurred in relation to total estimated costs at completion of the contract. For certain contracts with large up-front purchases of material, primarily in the Shipbuilding segment, sales are generally calculated based on the percentage that direct labor costs incurred bear to total estimated direct labor costs. The units-of-delivery measure is a modification of the percentage-of-completion method, which recognizes revenues as deliveries are made to the customer generally using unit sales values in accordance with the contract terms. The company estimates profit as the difference between total estimated revenue and total estimated cost of a contract and recognizes that profit over the life of the contract based on deliveries.

The use of the percentage-of-completion method depends on the ability of the company to make reasonably dependable cost estimates for the design, manufacture, and delivery of its products and services. Such costs are typically incurred over a period of several years, and estimation of these costs requires the use of judgment. Sales under cost-type contracts are recorded as costs are incurred.

Many contracts contain positive and negative profit incentives based upon performance relative to predetermined targets that may occur during or subsequent to delivery of the product. These incentives take the form of potential additional fees to be earned or penalties to be incurred. Incentives and award fees that can be reasonably assured and reasonably estimated are recorded over the performance period of the contract. Incentives and award fees that cannot be reasonably assured and reasonably estimated are recorded when awarded or at such time as a reasonable estimate can be made.

Other changes in estimates of contract sales, costs, and profits are recognized using the cumulative catch-up method of accounting. This method recognizes in the current period the cumulative effect of the changes on current and prior periods. Hence, the effect of the changes on future periods of contract performance is recognized as if the revised estimate had been the original estimate. A significant change in an estimate on one or more contracts could have a material effect on the company's consolidated financial position or results of operations.

*Certain Service Contracts* Revenue under contracts to provide services to non-federal government customers are generally recognized when services are performed. Service contracts include operations and maintenance contracts, and outsourcing-type arrangements, primarily in the Information and Services business. Revenue under such contracts is generally recognized on a straight-line basis over the period of contract performance, unless evidence suggests that the revenue is earned or the obligations are fulfilled in a different pattern. Costs incurred under these service contracts are expensed as incurred, except that direct and incremental set-up costs are capitalized and amortized over the life of the agreement. Operating profit related to such service contracts may fluctuate from period to period, particularly in the earlier phases of the contract.

Service contracts that include more than one type of product or service are accounted for under the provisions of Emerging Issues Task Force Issue No. 00-21 *Revenue Arrangements with Multiple Deliverables*. Accordingly, for applicable arrangements, revenue recognition includes the proper identification of separate units of accounting and the allocation of revenue across all elements based on relative fair values.

*Cost Estimation* The cost estimation process requires significant judgment and is based upon the professional knowledge and experience of the company's engineers, program managers, and financial professionals. Factors that are considered in estimating the work to be completed and ultimate contract recovery include the availability and productivity of labor, the nature and complexity of the work to be performed, the effect of change orders, the availability of materials, the effect of any delays in performance, availability and timing of funding from the

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customer, and the recoverability of any claims included in the estimates to complete. A significant change in an estimate on one or more contracts could have a material effect on the company's consolidated financial position or results of operations. Contract cost estimates are updated at least annually and more frequently as determined by events or circumstances. Cost and revenue estimates for each significant contract are generally reviewed and reassessed quarterly.

When estimates of total costs to be incurred on a contract exceed estimates of total revenue to be earned, a provision for the entire loss on the contract is recorded to cost of sales in the period the loss is determined. Loss provisions are first offset against costs that are included in inventoried assets, with any remaining amount reflected in liabilities.

**Purchase Accounting and Goodwill**

*Overview* The purchase price of an acquired business is allocated to the underlying tangible and intangible assets acquired and liabilities assumed based upon their respective fair market values, with the excess recorded as goodwill. Such fair market value assessments require judgments and estimates that can be affected by contract performance and other factors over time, which may cause final amounts to differ materially from original estimates. For acquisitions completed through December 31, 2008, adjustments to fair value assessments are recorded to goodwill over the purchase price allocation period (typically not exceeding twelve months). Adjustments related to income tax uncertainties, which may have extended beyond the purchase price allocation period, through December 31, 2008, were also recorded to goodwill.

*Acquisition Accruals* The company has established certain accruals in connection with indemnities and other contingencies from its acquisitions and divestitures. These accruals and subsequent adjustments have been recorded during the purchase price allocation period for acquisitions and as events occur for divestitures. The accruals were determined based upon the terms of the purchase or sales agreements and, in most cases, involve a significant degree of judgment. Management has recorded these accruals in accordance with its interpretation of the terms of the purchase or sale agreements, known facts, and an estimation of probable future events based on management's experience.

*Goodwill* The company performs impairment tests for goodwill as of November 30th of each year, or when evidence of potential impairment exists. When it is determined that impairment has occurred, a charge to operations is recorded. In order to test for potential impairment, the company uses a discounted cash flow analysis, corroborated by comparative market multiples where appropriate. Adverse equity market conditions and the resulting decline in current market multiples and the company's stock price as of November 30, 2008, have led to a goodwill impairment charge totaling \$3.1 billion at Shipbuilding and Space Technology. The company will continue to monitor the recoverability of the carrying value of its goodwill and other long-lived assets.

The principal factors used in the discounted cash flow analysis requiring judgment are the projected results of operations, weighted average cost of capital (WACC), and terminal value assumptions. The WACC takes into account the relative weights of each component of the company's consolidated capital structure (equity and debt) and represents the expected cost of new capital adjusted as appropriate to consider lower risk profiles associated with longer term contracts and barriers to market entry. The terminal value assumptions are applied to the final year of the discounted cash flow model.

Due to the many variables inherent in the estimation of a business's fair value and the relative size of the company's recorded goodwill, differences in assumptions may have a material effect on the results of the company's impairment analysis.

### **Litigation, Commitments, and Contingencies**

*Overview* The company is subject to a range of claims, lawsuits, environmental and income tax matters, and administrative proceedings that arise in the ordinary course of business. Estimating liabilities and costs associated with these matters requires judgment and assessment based upon professional knowledge and experience of management and its internal and external legal counsel. In accordance with Statement of Financial Accounting

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Standards (SFAS) No. 5, *Accounting for Contingencies*, amounts are recorded as charges to earnings when management, after taking into consideration the facts and circumstances of each matter, including any settlement offers, has determined that it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. The ultimate resolution of any such exposure to the company may vary from earlier estimates as further facts and circumstances become known.

*Environmental Accruals* The company is subject to the environmental laws and regulations of the jurisdictions in which it conducts operations. The company records an accrual to provide for the costs of expected environmental obligations when management becomes aware that an expenditure will be incurred and the amount of the liability can be reasonably estimated. Factors which could result in changes to the company's assessment of probability, range of loss, and environmental accruals include: modification of planned remedial actions, increase or decrease in the estimated time required to remediate, discovery of more extensive contamination than anticipated, results of efforts to determine legally responsible parties, changes in laws and regulations or contractual obligations affecting remediation requirements, and improvements in remediation technology. Although management cannot predict whether new information gained as projects progress will materially affect the estimated liability accrued, management does not anticipate that future remediation expenditures will have a material adverse effect on the company's financial position, results of operation, or cash flows.

*Litigation Accruals* Litigation accruals are recorded as charges to earnings when management, after taking into consideration the facts and circumstances of each matter, including any settlement offers, has determined that it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. The ultimate resolution of any exposure to the company may vary from earlier estimates as further facts and circumstances become known. Based upon the information available, the company believes that the resolution of any of these various claims and legal proceedings would not have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

*Uncertain Tax Positions* Effective January 1, 2007, the company measures and records uncertain tax positions in accordance with Financial Accounting Standards Board (FASB) Interpretation No. (FIN) 48 *Accounting for Uncertainty in Income Taxes* an Interpretation of FASB Statement No. 109. FIN 48 prescribes a threshold for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Only tax positions meeting the more-likely-than-not recognition threshold may be recognized or continue to be recognized in the financial statements. The timing and amount of accrued interest is determined by the applicable tax law associated with an underpayment of income taxes. If a tax position does not meet the minimum statutory threshold to avoid payment of penalties, the company recognizes an expense for the amount of the penalty in the period the tax position is claimed in the tax return of the company. The company recognizes interest accrued related to unrecognized tax benefits in income tax expense. Penalties, if probable and reasonably estimable, are recognized as a component of income tax expense. See Note 13 to the consolidated financial statements in Part II, Item 8. Prior to 2007, the company recorded accruals for tax contingencies and related interest when it determined that it was probable that a liability had been incurred and the amount of the contingency could be reasonably estimated based on specific events such as an audit or inquiry by a taxing authority. Under existing U.S. GAAP, prior to January 1, 2009, changes in accruals associated with uncertainties arising from the resolution of pre-acquisition contingencies of acquired businesses were charged or credited to goodwill; effective January 1, 2009, such changes will be recorded to income tax expense. Adjustments to other tax accruals are generally recorded in earnings in the period they are determined.

### **Retirement Benefits**



*Overview* Assumptions used in determining projected benefit obligations and the fair values of plan assets for the company's pension plans and other postretirement benefits plans are evaluated annually by management in consultation with its outside actuaries. In the event that the company determines that plan amendments or changes in the assumptions are warranted, future pension and postretirement benefit expenses could increase or decrease.

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**Assumptions** The principal assumptions that have a significant effect on the company's consolidated financial position and results of operations are the discount rate, the expected long-term rate of return on plan assets, and the health care cost trend rates. For certain plan assets where the fair market value is not readily determinable, such as real estate, private equity, and hedge funds, estimates of fair value are determined using the best information available.

**Discount Rate** The discount rate represents the interest rate that is used to determine the present value of future cash flows currently expected to be required to settle the pension and postretirement benefit obligations. The discount rate is generally based on the yield on high-quality corporate fixed-income investments. At the end of each year, the discount rate is primarily determined using the results of bond yield curve models based on a portfolio of high quality bonds matching the notional cash inflows with the expected benefit payments for each significant benefit plan. Taking into consideration the factors noted above, the company's weighted-average pension composite discount rate was 6.25 percent at December 31, 2008, and 6.22 percent at December 31, 2007. Holding all other assumptions constant, and since net actuarial gains and losses stayed within the 10 percent accounting corridor (as was the case for the 2008 expense measurement period), an increase or decrease of 25 basis points in the discount rate assumption for 2008 would have decreased or increased pension and postretirement benefit expense for 2008 by approximately \$30 million and decreased or increased the amount of the benefit obligation recorded at December 31, 2008, by approximately \$750 million. The effects of hypothetical changes in the discount rate for a single year may not be representative and may be asymmetrical or nonlinear for future years because of the application of the accounting corridor. The accounting corridor is a defined range within which amortization of net gains and losses is not required. Due to adverse capital market conditions the company's pension plan assets experienced a negative return of approximately 16 percent in 2008. As a result, substantially all of the company's plans have experienced net actuarial losses outside the 10 percent accounting corridor at the end of 2008, thus requiring accumulated gains and losses to be amortized to expense. As a result of this condition, sensitivity of net periodic costs to changes in the discount rate will be much higher in the near future than was the case in 2008.

**Expected Long-Term Rate of Return** The expected long-term rate of return on plan assets represents the average rate of earnings expected on the funds invested in a specified target asset allocation to provide for anticipated future benefit payment obligations. For 2008 and 2007, the company assumed an expected long-term rate of return on plan assets of 8.5 percent. An increase or decrease of 25 basis points in the expected long-term rate of return assumption for 2008, holding all other assumptions constant, would increase or decrease the company's pension and postretirement benefit expense for 2008 by approximately \$60 million.

**Health Care Cost Trend Rates** The health care cost trend rates represent the annual rates of change in the cost of health care benefits based on estimates of health care inflation, changes in health care utilization or delivery patterns, technological advances, and changes in the health status of the plan participants. For 2008, the company assumed an expected initial health care cost trend rate of 7.5 percent and an ultimate health care cost trend rate of 5 percent reached in 2014. In 2007, the company assumed an expected initial health care cost trend rate of 8 percent and an ultimate health care cost trend rate of 5 percent reached in 2012.

Differences in the initial through the ultimate health care cost trend rates within the range indicated below would have had the following impact on 2008 postretirement benefit results:

<i>\$ in millions</i>	1 Percentage Point Increase	1 Percentage Point Decrease
<b>Increase (Decrease) From Change In Health Care Cost Trend Rates To</b>		

Postretirement benefit expense	\$ 8	\$ (8)
Postretirement benefit liability	80	(90)

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Selected financial highlights are presented in the table below.

<i>\$ in millions, except per share</i>	Year Ended December 31		
	2008	2007	2006
Sales and service revenues	<b>\$ 33,887</b>	\$ 31,828	\$ 29,991
Cost of sales and service revenues	<b>27,698</b>	25,637	24,495
General and administrative expenses	<b>3,240</b>	3,173	3,002
Goodwill impairment	<b>3,060</b>		
Operating (loss) income	<b>(111)</b>	3,018	2,494
Interest expense	<b>295</b>	336	347
Other, net	<b>38</b>	16	169
Federal and foreign income taxes	<b>913</b>	887	723
Diluted (loss) earnings per share from continuing operations	<b>(3.83)</b>	5.18	4.51
Net cash provided by operating activities	<b>3,211</b>	2,890	1,756

**Sales and Service Revenues**

Sales and service revenues consist of the following:

<i>\$ in millions</i>	Year Ended December 31		
	2008	2007	2006
Product sales	<b>\$ 19,634</b>	\$ 18,577	\$ 18,294
Service revenues	<b>14,253</b>	13,251	11,697
Sales and service revenues	<b>\$ 33,887</b>	\$ 31,828	\$ 29,991

**2008** Revenues for principal product businesses in Integrated Systems, Space Technology, Electronics, and Shipbuilding during 2008 grew at a combined rate of approximately 6 percent over 2007, reflecting sales growth at all four reporting segments. Revenue for principal services businesses in Information & Services during 2008 grew approximately 8 percent over 2007 due largely to double digit growth at Mission Systems, resulting from increased volume on contracts newly awarded in 2007 and 2008 and increased activity on other contracts.

**2007** Revenues for principal product businesses in Aerospace, Electronics, and Shipbuilding during 2007 grew at a combined rate of approximately 3 percent over 2006, reflecting sales growth in Electronics and Shipbuilding, partially offset by reduced sales in Aerospace. The sales growth at Electronics and Shipbuilding is due to volume improvements across most business areas, while the sales reduction in Aerospace was anticipated as a number of contracts transitioned from development to production in 2007. Revenue for principal services businesses in Information & Services during 2007 grew approximately 11 percent over 2006 due largely to double digit growth at Information Technology and Technical Services, resulting from increased volume on contracts that were newly awarded in 2006 and increased activity on other contracts.



Table of Contents**NORTHROP GRUMMAN CORPORATION****Cost of Sales and Service Revenues**

Cost of sales and general and administrative expenses are comprised of the following:

<i>\$ in millions</i>	Year Ended December 31		
	2008	2007	2006
Cost of Sales and Service Revenues			
Cost of product sales	<b>\$ 15,490</b>	\$ 14,340	\$ 14,275
<i>% of product sales</i>	<b>78.9%</b>	77.2%	78.0%
Cost of service revenues	<b>12,208</b>	11,297	10,220
<i>% of service revenues</i>	<b>85.7%</b>	85.3%	87.4%
General and administrative expenses	<b>3,240</b>	3,173	3,002
<i>% of total sales and service revenues</i>	<b>9.6%</b>	10.0%	10.0%
Goodwill impairment	<b>3,060</b>		
Cost of sales and service revenues	<b>\$ 33,998</b>	\$ 28,810	\$ 27,497

*Cost of Product Sales and Service Revenues*

**2008** Cost of product sales during 2008 increased \$1.2 billion, or 8 percent, over 2007 and increased 170 basis points as a percent of product sales over the same period due largely to the sales volume increase described above. The increase in cost of product sales as a percentage of product sales is primarily due to cost growth at the Gulf Coast shipyards. In the first quarter of 2008, the company recorded a \$326 million pre-tax charge on LHD-8 and other Shipbuilding programs, and in the third quarter of 2008, the company recorded additional costs for work delays at a subcontractor on the LPD program as a result of Hurricane Ike. The LHD-8 program achieved several important risk retirement milestones toward its planned delivery date, and as a result \$63 million of the first quarter 2008 charge was reversed in the second half of 2008.

Cost of service revenues during 2008 increased \$911 million, or 8 percent, over 2007 and increased 40 basis points as a percent of service revenues over the same period due primarily to the sales volume increase described above. The increase in cost of service revenues as a percentage of service revenues is primarily due to lower performance in the Commercial, State & Local business area in Information Technology.

**2007** Cost of product sales during 2007 increased \$65 million over 2006 while decreasing 80 basis points as a percentage of product sales over the same period. The increase in cost of product sales is due largely to the sales volume increase described above while the margin rate improvement is primarily driven by improved program performance at Aerospace and Shipbuilding.

Cost of service sales during 2007 increased \$1.1 billion, or 11 percent, over 2006 while decreasing 210 basis points as a percentage of service sales over the same period. Cost of service revenues in 2007 increased over 2006 primarily due to higher sales volume at Information & Services.

*General and Administrative Expenses* In accordance with industry practice and the regulations that govern the cost accounting requirements for government contracts, most general corporate expenses incurred at both the segment and corporate locations are considered allowable and allocable costs on government contracts. For most components of the

company, these costs are allocated to contracts in progress on a systematic basis and contract performance factors include this cost component as an element of cost. General and administrative expenses primarily relate to segment operations. General and administrative expenses as a percentage of total sales and service revenues decreased from 10 percent in 2007 to 9.6 percent in 2008 primarily as a result of costs remaining relatively constant while revenues increased over the same period in 2007. General and administrative expenses remained at a constant rate of approximately 10 percent of sales in 2007 and 2006.

*Goodwill Impairment* In the fourth quarter of 2008, the company recorded a non-cash charge totaling \$3.1 billion at Shipbuilding and Space Technology for the impairment of goodwill. In accordance with

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SFAS No. 142 *Goodwill and Other Intangible Assets*, the company performed its required annual impairment test for goodwill using a discounted cash flow analysis supported by comparative market multiples to determine the fair values of its businesses versus their book values. The test as of November 30, 2008, indicated that the book values for Shipbuilding and Space Technology exceeded the fair values of these businesses. The impairment charge is primarily driven by adverse equity market conditions that caused a decrease in current market multiples and the company's stock price as of November 30, 2008, compared with the test performed as of November 30, 2007. The charge reduces goodwill recorded in connection with acquisitions made in 2001 and 2002 and does not impact the company's normal business operations.

Prior to recording the goodwill impairment charges at Shipbuilding and Space Technology, the company tested the purchased intangible assets and other long-lived assets at both of these businesses as required by SFAS No. 144 *Accounting for the Impairment or Disposal of Long-lived Assets*, and the carrying value of these assets were determined not to be impaired.

**Operating (Loss) Income**

The company considers operating income to be an important measure for evaluating its operating performance and, as is typical in the industry, defines operating income as revenues less the related cost of producing the revenues and general and administrative expenses. Operating income for the company is further evaluated for each of the business segments in which the company operates.

Management of the company internally manages its operations by reference to segment operating income. Segment operating income is defined as operating income before unallocated expenses and net pension adjustment, both of which do not affect the segments, and the reversal of royalty income, which is classified as other income for financial reporting purposes. Segment operating income is one of the key metrics management uses to evaluate operating performance. Segment operating income is not, however, a measure of financial performance under U.S. GAAP, and may not be defined and calculated by other companies in the same manner.

\$ in millions	Year Ended December 31		
	2008	2007	2006
Segment operating (loss) income	\$ (145)	\$ 3,115	\$ 2,837
Unallocated expenses	(159)	(206)	(287)
Net pension adjustment	263	127	(37)
Royalty income adjustment	(70)	(18)	(19)
Total operating (loss) income	\$ (111)	\$ 3,018	\$ 2,494

*Segment Operating (Loss) Income*

2008 Segment operating loss for the year ended December 31, 2008, was \$145 million as compared with segment operating income of \$3.1 billion in 2007. The decrease was primarily due to the goodwill impairment charge totaling \$3.1 billion at Shipbuilding and Space Technology. See the Segment Operating Results section below for further information.

2007 Segment operating income for the year ended December 31, 2007, increased \$278 million, or 10 percent, as compared with 2006. Total segment operating income was 9.8 percent and 9.5 percent of total sales and service



revenues for the years ended December 31, 2007, and 2006, respectively. See the Segment Operating Results section below for further information.

*Unallocated Expenses*

2008 Unallocated expenses for the year ended December 31, 2008, decreased \$47 million, or 23 percent, as compared with the same period in 2007. The decrease was primarily due to \$88 million in higher legal and investigative provisions recorded in 2007, partially offset by an increase in environmental, health and welfare, and other unallocated corporate costs in 2008.

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**2007** Unallocated expenses for the year ended December 31, 2007, decreased \$81 million, or 28 percent, as compared with 2006. The decrease was primarily due to \$98 million in lower post-retirement benefit costs determined under GAAP as a result of a plan design change in 2006 and \$36 million lower legal and investigative provisions, partially offset by an increase in other costs including \$18 million in higher litigation expenses. During the third quarter 2006, the company recorded a \$112.5 million pre-tax provision for its settlement offer to the U.S. Department of Justice and a restricted customer.

**Net Pension Adjustment** The net pension adjustment reflects the difference between pension expense determined in accordance with SFAS No. 87 *Employer's Accounting for Pensions* (U.S. GAAP pension expense) and the pension expense allocated to the operating segments under CAS. The net pension adjustment increased income by \$263 million and \$127 million in 2008 and 2007, respectively, as compared with an expense of \$37 million in 2006. The income in 2008 and 2007 was due to decreased U.S. GAAP pension expense primarily resulting from better than estimated investment returns and higher discount rate assumptions.

Due to adverse capital market conditions the company's pension plan assets experienced a negative return of approximately 16 percent in 2008 compared with a long-term estimated return of 8.5 percent. As a result of 2008 actual plan returns, the company estimates U.S. GAAP pension expense of \$839 million in 2009, a substantial increase over the 2008 expense of \$225 million. The 2009 estimate is based on a 6.25 discount rate and a long-term rate of return of 8.5 percent.

**Interest Expense**

**2008** Interest expense decreased \$41 million, or 12 percent, in 2008 as compared with 2007. The decrease is primarily due to the conversion and redemption of the mandatorily redeemable convertible preferred stock in April 2008, which reduced the related dividends paid during the 2008 periods (which were recorded as interest expense in the accompanying consolidated statements of operations and comprehensive (loss) income in Part II, Item 8). Lower LIBOR rates on the interest rate swap agreements also contributed to the decrease in interest expense.

**2007** Interest expense decreased \$11 million, or 3 percent, in 2007 as compared with 2006. The decrease is primarily due to a lower average debt balance.

**Other, net**

**2008** Other, net for the year ended December 31, 2008 was \$38 million income, an increase of \$22 million, as compared with 2007, primarily due to \$59 million in royalty income from patent infringement settlements at Electronics in 2008, partially offset by negative mark to market adjustments on investments in marketable securities used as a funding source for non-qualified employee benefits.

**2007** Other, net for the year ended December 31, 2007 was \$16 million income, a decrease of \$153 million, as compared with 2006. During 2006, the company sold its remaining 9.7 million TRW Automotive (TRW Auto) shares, generating pre-tax gains of \$111 million.

**Federal and Foreign Income Taxes**

**2008** The company's effective tax rate on earnings from continuing operations for the year ended December 31, 2008, was 33.9 percent (excluding the non-cash, non-deductible goodwill impairment charge of \$3.1 billion at Shipbuilding and Space Technology) as compared with 32.9 percent in 2007. During 2008, the company recognized net tax benefits of \$35 million, primarily attributable to a settlement reached with the U.S. Internal Revenue Service (IRS) and the Congressional Joint Committee on Taxation with respect to the IRS audit of TRW tax returns for the

years 1999-2002.

2007 The company's effective tax rate on earnings from continuing operations for the year ended December 31, 2007, was 32.9 percent compared with 31.2 percent in 2006. During 2007, the company reached a partial settlement agreement with the IRS regarding its audit of the company's tax years ended 2001-2003 resulting in a tax benefit of \$22 million.

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**Diluted (Loss) Earnings Per Share**

*2008* Diluted loss per share from continuing operations for 2008 was \$3.83 per share, as compared with \$5.18 diluted earnings per share in 2007. Earnings per share are based on weighted-average diluted shares outstanding of 334.5 million for 2008 and 354.3 million for 2007. For the year ended December 31, 2008, the potential dilutive effect of 7.1 million shares from stock options, stock awards, and the mandatorily redeemable preferred stock were excluded from the computation of weighted average diluted common shares outstanding as the shares would have had an anti-dilutive effect. The goodwill impairment charge of \$3.1 billion at Shipbuilding and Space Technology reduced the company's diluted earnings per share from continuing operations by \$9.04 per share.

*2007* Diluted earnings per share from continuing operations for 2007 was \$5.18 per share, an increase of 15 percent from \$4.51 per share in 2006. Earnings per share are based on weighted-average diluted shares outstanding of 354.3 million for 2007 and 358.6 million for 2006. Diluted earnings per share from continuing operations and the weighted-average diluted shares outstanding include the dilutive effects of stock options, stock awards and the mandatorily redeemable convertible preferred stock. All of the mandatorily redeemable convertible preferred stock was converted into common stock by April 2008. See Note 4 to the consolidated financial statements in Part II, Item 8.

**Net Cash Provided by Operating Activities**

*2008* Net cash provided by operating activities in 2008 increased \$321 million as compared with 2007 and reflects lower income tax payments and continued trade working capital reductions. Pension plan contributions totaled \$320 million in 2008, of which \$200 million was voluntarily pre-funded, and were comparable to 2007.

Net cash provided by operating activities for 2008 included \$113 million of federal and state income tax refunds and \$23 million of interest income.

*2007* Net cash provided by operating activities in 2007 increased \$1.1 billion as compared with 2006, and reflects lower pension contributions, higher net earnings, and continued trade working capital reductions. Pension plan contributions totaled \$342 million in 2007, of which \$200 million was voluntarily pre-funded, compared with contributions of \$1.2 billion in 2006, of which \$800 million was voluntarily pre-funded.

Net cash provided by operating activities for 2007 included the receipt of \$125 million of insurance proceeds related to Hurricane Katrina, \$52 million of federal and state income tax refunds, and \$21 million of interest.

**Table of Contents****NORTHROP GRUMMAN CORPORATION****SEGMENT OPERATING RESULTS**

<i>\$ in millions</i>	Year Ended December 31		
	2008	2007	2006
<b>Sales and Service Revenues</b>			
<b>Information &amp; Services</b>			
Mission Systems	\$ 5,640	\$ 5,077	\$ 4,704
Information Technology	4,518	4,486	3,962
Technical Services	2,296	2,177	1,858
<b>Aerospace</b>			
Integrated Systems	5,504	5,067	5,500
Space Technology	4,336	4,176	3,869
<b>Electronics</b>	7,090	6,528	6,267
<b>Shipbuilding</b>	6,145	5,788	5,321
Intersegment eliminations	(1,642)	(1,471)	(1,490)
Total sales and service revenues	\$ 33,887	\$ 31,828	\$ 29,991
<b>Operating (Loss) Income</b>			
<b>Information &amp; Services</b>			
Mission Systems	\$ 508	\$ 508	\$ 451
Information Technology	305	329	342
Technical Services	121	120	120
<b>Aerospace</b>			
Integrated Systems	613	591	551
Space Technology	(196)	329	311
<b>Electronics</b>	952	813	786
<b>Shipbuilding</b>	(2,307)	538	393
Intersegment eliminations	(141)	(113)	(117)
Total segment (loss) operating income	\$ (145)	\$ 3,115	\$ 2,837

*Realignments* The company, from time to time, acquires or disposes of businesses, and realigns contracts, programs or business areas among or within its operating segments that possess similar customers, expertise, and capabilities. These realignments are designed to more fully leverage existing capabilities and enhance development and delivery of products and services. During the second quarter of 2008, the company transferred certain programs and assets from the missiles business in the Mission Systems segment to the Space Technology segment. In January 2008, the Newport News and Ship Systems businesses were realigned into a single segment called Northrop Grumman Shipbuilding. Previously, these businesses were separate operating segments which were aggregated into a single segment for financial reporting purposes. In addition, certain Electronics businesses were transferred to Mission Systems during the first quarter of 2008. The operating results for all periods presented have been revised to reflect these changes. See a description of the segment business areas and specific realignments located in Part I, Item 1.

*Subsequent Realignment* In January 2009, the company streamlined its organizational structure by reducing the number of reporting segments from seven to five. The five segments are Aerospace Systems, which combines the former Integrated Systems and Space Technology segments; Electronic Systems; Information Systems, which combines the former Information Technology and Mission Systems segments; Shipbuilding and Technical Services. The creation of the Aerospace Systems and Information Systems segments strengthens alignment with customers, improves the company's ability to execute on programs and win new business, and enhances cost competitiveness. This subsequent realignment is not reflected in any of the accompanying financial information.

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**KEY SEGMENT FINANCIAL MEASURES**

**Operating Performance Assessment and Reporting**

The company manages and assesses the performance of its businesses based on its performance on individual contracts and programs obtained generally from government organizations using the financial measures referred to below, with consideration given to the Critical Accounting Policies, Estimates and Judgments described on page 32. Based on this approach and the nature of the company's operations, the discussion of consolidated results of operations generally focuses around the company's seven reporting segments versus distinguishing between products and services. Product sales are predominantly generated in the Electronics, Integrated Systems, Space Technology and Shipbuilding segments, while the majority of the company's service revenues are generated by the Information Technology, Mission Systems and Technical Services segments.

**Sales and Service Revenues**

Period-to-period sales reflect performance under new and ongoing contracts. Changes in sales and service revenues are typically expressed in terms of volume. Unless otherwise described, volume generally refers to increases (or decreases) in reported revenues due to varying production activity levels, delivery rates, or service levels on individual contracts. Volume changes will typically carry a corresponding income change based on the margin rate for a particular contract.

**Segment Operating Income**

Segment operating income reflects the performance of segment contracts. Excluded from this measure are certain costs not directly associated with contract performance, including the portion of corporate expenses such as management and administration, legal, environmental, certain compensation and other retiree benefits, and other expenses not considered allowable or allocable under applicable CAS regulations and the FAR, and therefore not allocated to the segments. Changes in segment operating income are typically expressed in terms of volume, as discussed above, or performance. Performance refers to changes in contract margin rates. These changes typically relate to profit recognition associated with revisions to total estimated costs at completion of the contract (EAC) that reflect improved (or deteriorated) operating performance on a particular contract. Operating income changes are accounted for on a cumulative to date basis at the time an EAC change is recorded.

Operating income may also be affected by, among other things, the effects of workforce stoppages, the effects of natural disasters (such as hurricanes and earthquakes), resolution of disputed items with the customer, recovery of insurance proceeds, and other discrete events. At the completion of a long-term contract, any originally estimated costs not incurred or reserves not fully utilized (such as warranty reserves) could also impact contract earnings. Where such items have occurred, and the effects are material, a separate description is provided.

For a more complete understanding of each segment's product and services, see the business descriptions in Part I, Item 1.

**Program Descriptions**

For convenience, a brief description of certain programs discussed in this Form 10-K are included in the Glossary of Programs beginning on page 55.

Table of Contents**NORTHROP GRUMMAN CORPORATION****INFORMATION & SERVICES**

	Year Ended December 31								
	2008			2007			2006		
<i>\$ millions</i>	Sales	Operating Income	% of Sales	Sales	Operating Income	% of Sales	Sales	Operating Income	% of Sales
Mission Systems	\$ 5,640	\$ 508	9.0%	\$ 5,077	\$ 508	10.0%	\$ 4,704	\$ 451	9.6%
Information Technology	4,518	305	6.8%	4,486	329	7.3%	3,962	342	8.6%
Technical Services	2,296	121	5.3%	2,177	120	5.5%	1,858	120	6.5%
<b>Information &amp; Services</b>	<b>\$ 12,454</b>	<b>\$ 934</b>	<b>7.5%</b>	<b>\$ 11,740</b>	<b>\$ 957</b>	<b>8.2%</b>	<b>\$ 10,524</b>	<b>\$ 913</b>	<b>8.7%</b>

**Sales and Service Revenues***Mission Systems*

**2008** Mission systems revenue increased \$563 million, or 11 percent, as compared with 2007. The increase was due to \$337 million in higher sales in Intelligence, Surveillance and Reconnaissance (ISR) and \$200 million in higher sales in Command, Control and Communications (C3). The increase in ISR is primarily due to the ramp up of certain restricted programs and the Navstar Global Positioning System Operational Control Segment (Navstar GPS OCX), partially offset by lower volume on the wind down of the Space Based Surveillance System (SBSS) program. The increase in C3 is due to higher volume across various programs, including the Counter-Rocket Artillery Mortar (CRAM), Command Post Platform (CPP) and Joint National Integration Center Research & Development (JRDC), partially offset by lower deliveries and development activities in the F-22 and F-35 Lightning II (F-35) programs.

**2007** Mission Systems revenue increased \$373 million, or 8 percent, as compared with 2006. The increase was due to \$279 million in higher sales in ISR and \$118 million in higher sales in C3. The increase in ISR is principally due to the acquisition of Essex. The increase in C3 is due to higher volume in several programs, including the Force XXI Battle Brigade and Below (FBCB2) I-Kits program and international commercial businesses and increased scope and funding levels in the JRDC program. These increases were partially offset by lower volume in the F-35 development program as hardware development in 2006 winds down in 2007 and reduced scope and deliveries accelerated into 2006 in the F-22 program.

*Information Technology*

**2008** Information Technology revenue increased \$32 million, or 1 percent, as compared with 2007. The increase was primarily due to \$130 million in higher sales in Intelligence, and \$62 million in higher sales in Defense, partially offset by \$84 million in lower sales in Civilian Agencies and \$52 million in lower sales in Commercial, State & Local (CS&L). The increase in Intelligence is due to new restricted programs and growth on existing programs, along with the acquisition of 3001 in the fourth quarter of 2008 while the increase in Defense is associated with higher volume in the Network Centric Solutions program. The decreases in Civilian Agencies and CS&L are primarily due to the ending of programs from the previous year and a more disciplined approach to obtaining new business in the CS&L area.

**2007** Information Technology revenue increased \$524 million, or 13 percent, as compared with 2006. The increase was primarily due to \$275 million in higher sales in CS&L, \$222 million in higher sales in Intelligence, and \$133 million in higher sales in Defense, partially offset by \$73 million in lower sales in Civilian Agencies. The



increase in CS&L is associated with the effect of a full year of sales from new programs awarded in 2006, including the New York City Wireless (NYCWiN), Virginia IT outsourcing, and San Diego County IT outsourcing programs. The increase in Intelligence is due to new restricted program wins and higher volume on existing programs. The increase in Defense is due to increased volume on various existing programs and new

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business wins. The decrease in Civilian Agencies is primarily due to customer program budget reductions and program completions.

*Technical Services*

**2008** Technical Services revenue increased \$119 million or 5 percent, as compared with 2007. The increase is primarily due to \$113 million in higher sales in Life Cycle Optimization & Engineering (LCOE) and \$28 million in higher sales in Training & Simulation (TSG), partially offset by \$26 million in lower sales in Systems Support (SSG). The increase in LCOE is associated with higher volume in the Hunter CLS and B-2 Stealth Bomber (B-2) programs. The increase in TSG is primarily due to higher sales volume from various new training and simulation program awards. The decrease in SSG is associated with the completion of the Joint Base Operations Support program and decreased activity on the Nevada Test Site program.

**2007** Technical Services revenue increased \$319 million or 17 percent, as compared with 2006. The increase is primarily due to \$248 million and \$66 million in higher sales in SSG and LCOE, respectively. The increase in SSG is primarily driven by \$252 million from the effects of a full year of sales for the Nevada Test Site program in 2007 as compared to six months of revenue in 2006. The increase in LCOE is due to increased demand for F-15 repairs at the Warner Robins Regional Repair Service Center, increased demand on the Hunter CLS program and increased work on the B-2 programs.

**Segment Operating Income**

*Mission Systems*

**2008** Operating income at Mission Systems was comparable with 2007. The increase in operating income due to higher sales volume was offset by \$51 million in lower performance results. The decrease in operating income as a percentage of sales reflects lower performance for command, control and communications programs, including higher planned internal investment for a new business opportunity, and final allocation of current and prior year overhead items.

**2007** Mission Systems operating income increased \$57 million, or 13 percent, in 2007 as compared with 2006. The increase is driven by \$37 million from the higher sales volume described above and \$20 million in net performance improvements. The increase in operating income as a percentage of sales is due to cost improvements achieved based on increases in customer order quantities in the FBCB2 I-Kits program, final negotiation of award fee earned on the National Team Battle Management Command and Control (BMC2) program, lower labor costs and favorable pricing of supplier procured materials in the CPP program and elimination of risk associated with hardware obsolescence in the Ground-Based Midcourse Defense Fire Control and Communications (GFC/C) program. Net performance improvements were partially offset by \$12 million in higher amortization of purchased intangibles.

*Information Technology*

**2008** Information Technology operating income decreased \$24 million, or 7 percent, as compared with 2007. The decrease in operating income was primarily driven by lower performance results in CS&L, primarily due to a \$57 million negative performance adjustment in the NYCWiN program recorded in the third quarter of 2008. The adjustment includes provisions related to a key supplier as well as a revised estimate of cost to complete the program.

**2007** Information Technology operating income decreased \$13 million, or 4 percent, as compared with 2006. The decrease in operating income is due to \$51 million in lower net performance results, partially offset by \$38 million from the higher sales volume described above. The decrease in operating income as a percentage of sales was driven by \$28 million in increased amortization of deferred and other outsourcing costs on large IT outsourcing programs

compared to the prior period, and \$22 million in discretionary spending for internal information systems infrastructure expected to yield future cost improvements.

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**Table of Contents****NORTHROP GRUMMAN CORPORATION***Technical Services*

**2008** Technical Services operating income increased \$1 million, or 1 percent, as compared with 2007. The increase in operating income due to higher sales volume was partially offset by a higher level of planned internal investment and final allocation of current and prior year overhead items.

**2007** Technical Services operating income was comparable with 2006. The increase in operating income due to higher sales volume was offset by the effects of performance improvements taken in the prior year and favorable 2006 margin adjustments to reflect risk reduction on contracts for spares production on fixed price contracts. A lower margin mix from the Nevada Test Site program also contributed to offsetting the volume increase.

**AEROSPACE**

	Year Ended December 31								
	2008			2007			2006		
	Sales	Operating Income (Loss)	% of Sales	Sales	Operating Income	% of Sales	Sales	Operating Income	% of Sales
<i>\$ millions</i>									
Integrated Systems	\$ 5,504	\$ 613	11.1%	\$ 5,067	\$ 591	11.7%	\$ 5,500	\$ 551	10.0%
Space Technology	4,336	(196)	(4.5)%	4,176	329	7.9%	3,869	311	8.0%
<b>Aerospace</b>	<b>\$ 9,840</b>	<b>\$ 417</b>	<b>4.2%</b>	<b>\$ 9,243</b>	<b>\$ 920</b>	<b>10.0%</b>	<b>\$ 9,369</b>	<b>\$ 862</b>	<b>9.2%</b>

**Sales and Service Revenues***Integrated Systems*

**2008** Integrated Systems revenue increased \$437 million, or 9 percent, as compared with 2007. The increase was primarily due to higher volume associated with Unmanned Combat Air System Carrier Demonstration (UCAS-D), Global Hawk High Altitude Long Endurance (HALE) Systems, B-2, Joint Surveillance Target Attack Radar System (Joint STARS), Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft System, and restricted programs, partially offset by lower volume in the E-2 programs, Multi-Platform Radar Technology Insertion Program (MP-RTIP), F-35, and E-10A programs.

**2007** Integrated Systems revenue decreased \$433 million, or 8 percent, as compared with 2006. Approximately \$325 million of the decrease was a result of the transition of the E-2D Advanced Hawkeye, F-35 and EA-18G development programs to their early production phases. Also contributing to the reduction in revenue was approximately \$160 million from the effects of significant customer-directed scope reductions associated with the E-10A platform and related MP-RTIP efforts. These reductions were partially offset by higher volume of \$69 million for the F/A-18 Multi-Year Procurement (MYP) and \$77 million for the Global Hawk programs.

*Space Technology*

**2008** Space Technology revenue increased \$160 million, or 4 percent, in 2008 as compared with 2007. The increase is primarily due to \$202 million higher sales in National Systems, \$104 million higher sales in Civil Systems, and \$68 million higher sales in Missile Systems, partially offset by \$206 million lower sales in Military Systems. The increase in National Systems is due to higher volume on restricted programs, partially offset by the termination of the Space Radar program in the second quarter of 2008. The increase in Civil Systems is due to higher volume associated

with the JWST and NPOESS programs. The increase in Missile Systems is due to higher volume associated with the KEI program. The decrease in Military Systems is due to lower volume associated with the AEHF and STSS programs.

*2007* Space Technology revenue increased \$307 million, or 8 percent, in 2007 as compared with 2006. The increase was primarily due to \$187 million higher sales in National Systems, \$97 million higher sales in Missile Systems, and \$49 million higher sales in Technology & Emerging Systems. The increase in National Systems is due to higher volume on restricted programs and the Space Radar program. The increase in Technology &

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Emerging Systems is due to higher volume on restricted programs. The increase in Missile Systems is due to higher volume associated with the KEI program.

**Segment Operating (Loss) Income***Integrated Systems*

**2008** Integrated Systems operating income increased \$22 million, or 4 percent, as compared with 2007. The increase in operating income reflects \$49 million from the higher sales volume described above, partially offset by the impact of a \$27 million favorable adjustment in 2007 related to the settlement of prior years' overhead costs.

**2007** Integrated Systems operating income increased \$40 million, or 7 percent, as compared with 2006. The increase in operating income is due to \$91 million in net performance improvements, partially offset by \$51 million in the lower sales volume described above. The increase in operating income as a percentage of sales is primarily due to risk reduction achieved on the Global Hawk, E-2 and B-2 programs and the favorable settlement of a prior year's overhead costs.

*Space Technology*

**2008** Space Technology operating loss was \$196 million as compared with operating income of \$329 million in 2007. The decrease is due to a goodwill impairment charge of \$570 million (see *Goodwill Impairment* on page 33), partially offset by the higher sales volume described above, and \$31 million in net performance improvements. The net performance improvements are associated with risk retirement in several key programs including KEI, ICBM, ABL and various restricted programs.

**2007** Space Technology operating income increased \$18 million, or 6 percent, as compared with 2006. The increase is due to \$24 million in the higher sales volume described above, partially offset by \$6 million in lower performance results.

**ELECTRONICS**

				Year Ended December 31					
				2008			2007		
				Operating			Operating		
				Income			Income		
				(Loss)			(Loss)		
				% of			% of		
				Sales			Sales		
				Sales			Sales		
				Income			Income		
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				Sales			Sales		

2007 Electronics revenue increased \$261 million, or 4 percent, as compared with 2006, reflecting \$169 million higher sales in Land Forces, \$133 million higher sales in the Space & ISR Systems, and \$97 million in Naval & Marine Systems (NMD), partially offset by \$136 million lower sales in Aerospace Systems. The increase in Land Forces sales is primarily due to higher deliveries on communication and weapons & sensor programs. The increase in Space & ISR Systems sales is primarily attributable to increases in intelligence, surveillance and reconnaissance programs. The increase in NMS sales is primarily due to higher volume on a restricted program. The lower Aerospace Systems sales are primarily due to the effect of declining volume on fixed price development programs.

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Table of Contents**NORTHROP GRUMMAN CORPORATION****Segment Operating Income**

**2008** Electronics operating income increased \$139 million, or 17 percent, as compared with 2007. The increase in operating income is primarily due to \$75 million from the higher sales volume described above and \$59 million in royalty income resulting from patent infringement settlements at Navigation Systems. The 2008 operating income includes a pre-tax charge of \$20 million for the company's Wedgetail MESA program associated with potential liquidated damages arising from the prime contractor's announced schedule delay in completing the program. The 2007 operating income includes a pre-tax charge of \$27 million for the F-16 Block 60 fixed-price development combat avionics program.

**2007** Electronics operating income increased \$27 million, or 3 percent, as compared with 2006. The increase in operating income is largely attributable to higher volume, primarily in Government Systems, Defensive Systems, and Naval & Marine Systems. Operating income included a \$27 million pre-tax charge for the F-16 Block 60 fixed-price development combat avionics program to reflect a higher estimate of software integration costs to complete the Falcon Edge electronic warfare suite. The 2006 operating income includes \$121 million in pre-tax charges primarily for the MESA and Advanced Self Protection Integrated Suite (ASPI) II programs. The 2007 operating income also includes \$14 million in consolidation costs related to the closure of several facilities as a result of a continuing focus on effective infrastructure management and \$18 million in provisions for settled and outstanding legal matters.

**SHIPBUILDING**

		Year Ended December 31							
		<b>2008</b>		<b>2007</b>				<b>2006</b>	
		<b>Operating</b>	<b>% of</b>		<b>Operating</b>	<b>% of</b>		<b>Operating</b>	<b>% of</b>
<i>\$ millions</i>	<b>Sales</b>	<b>Income</b>	<b>Sales</b>	<b>Sales</b>	<b>Income</b>	<b>Sales</b>	<b>Sales</b>	<b>Income</b>	<b>Sales</b>
<b>Shipbuilding</b>	<b>\$ 6,145</b>	<b>\$ (2,307)</b>	<b>(37.5)%</b>	<b>\$ 5,788</b>	<b>\$ 538</b>	<b>9.3%</b>	<b>\$ 5,321</b>	<b>\$ 393</b>	<b>7.4%</b>

**Sales and Service Revenues**

**2008** Shipbuilding revenues increased \$357 million, or 6 percent, as compared with 2007. The increase is primarily due to \$254 million higher sales in Aircraft Carriers, \$178 million higher sales in Surface Combatants, and \$112 million higher sales in Fleet Support, partially offset by \$184 million lower sales in Expeditionary Warfare. The increase in Aircraft Carriers is primarily due to higher sales volume on the *Gerald R. Ford*, *USS Enterprise* Extended Docking Selected Restricted Availability (EDSRA), and *USS Roosevelt* Refueling and Complex Overhaul (RCOH), partially offset by lower volume on the *USS Carl Vinson*. The increase in Surface Combatants is primarily due to higher sales volume in the DDG 51 and DDG 1000 programs. The increase in Fleet Support is primarily due to the consolidation of AMSEC in the 2008 period. Expeditionary Warfare sales were negatively impacted by a contract adjustment of \$134 million on the LHD-8 program in the first quarter of 2008 and the Hurricane Gustav impact in the third quarter of 2008, partially offset by higher sales in the LPD program. In 2007, all programs at the Pascagoula, Mississippi facility were negatively impacted by a labor strike.

**2007** Shipbuilding revenues increased \$467 million, or 9 percent as compared with 2006. The increase was primarily due to \$252 million in higher sales in Expeditionary Warfare, \$92 million in higher sales in Fleet Support, \$81 million in higher sales in Coast Guard and Coastal Defense, \$53 million in higher sales in Submarines, \$52 million in higher sales in Aircraft Carriers, partially offset by \$33 million in lower sales in Surface Combatants,



and \$25 million in lower sales in Services, Commercial & Other. The increase in Expeditionary Warfare was primarily due to higher sales volume in the LPD and LHA programs due to production ramp-ups, partially offset by lower sales volume in the LHD program as a result of a labor strike at the Pascagoula, Mississippi shipyard. The increase in Fleet Support was due to the reorganization of AMSEC. The increase in Coast Guard and Coastal Defense was due to higher sales volume in the NSC program. The decrease in Surface Combatants was due to lower sales in the DDG 1000 program and the impacts of the labor strike.

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Table of Contents**NORTHROP GRUMMAN CORPORATION****Segment Operating (Loss) Income**

**2008** Operating loss at Shipbuilding was \$2.3 billion as compared with operating income of \$538 million in the same period of 2007. The decrease is due to a goodwill impairment charge of \$2.5 billion (see *Goodwill Impairment* on page 33), and \$366 million in net lower performance results, partially offset by the higher sales volume described above. The decrease in net performance results is primarily due to a \$326 million pre-tax charge on LHD-8 and other programs in the first quarter of 2008, cost growth and schedule delays on several LPD ships resulting primarily from the effects of Hurricane Ike on an LPD subcontractor (see Note 16 to the consolidated financial statements in Part II, Item 8), and the effect of reductions in contract booking rates resulting from management taking a more conservative approach in its risk assessment on programs throughout the Gulf Coast Shipyards. The LHD-8 program achieved several important risk retirement milestones toward its planned delivery date, and as a result, \$63 million of the first quarter 2008 charge was reversed in the second half of 2008.

**2007** Operating income at Shipbuilding increased \$145 million, or 37 percent, as compared with 2006. The increase is primarily due to \$43 million from the higher sales volume described above, \$62 million for recovery of lost profits from a settlement of a portion of the Katrina insurance claim, and a \$23 million pre-tax gain resulting from the reorganization of AMSEC, partially offset by \$55 million for a contract earnings rate adjustment on LHD-8 associated with a schedule extension resulting from manpower constraints in critical crafts (electrical and pipefitting) following the strike at the Pascagoula shipyard in 2007.

**BACKLOG**

Total backlog at December 31, 2008, was approximately \$78 billion. Total backlog includes both funded backlog (firm orders for which funding is contractually obligated by the customer) and unfunded backlog (firm orders for which funding is not currently contractually obligated by the customer). Unfunded backlog excludes unexercised contract options and unfunded IDIQ orders. For multi-year services contracts with non-federal government customers having no stated contract values, backlog includes only the amounts committed by the customer.

The following table presents funded and unfunded backlog by segment at December 31, 2008 and 2007:

\$ in millions	2008			2007		
	Funded	Unfunded	Total Backlog	Funded	Unfunded	Total Backlog
<b>Information &amp; Services</b>						
Mission Systems	\$ 2,646	\$ 3,004	\$ 5,650	\$ 2,365	\$ 3,288	\$ 5,653
Information Technology	2,724	1,899	4,623	2,581	2,268	4,849
Technical Services	1,734	2,600	4,334	1,471	3,193	4,664
<b>Aerospace</b>						
Integrated Systems	5,759	5,122	10,881	4,204	4,525	8,729
Space Technology	1,889	17,761	19,650	2,295	13,963	16,258
<b>Electronics</b>	8,437	2,124	10,561	7,887	2,047	9,934
<b>Shipbuilding</b>	14,205	8,148	22,353	10,348	3,230	13,578
<b>Total backlog</b>	<b>\$ 37,394</b>	<b>\$ 40,658</b>	<b>\$ 78,052</b>	<b>\$ 31,151</b>	<b>\$ 32,514</b>	<b>\$ 63,665</b>

Backlog is converted into the following years' sales as costs are incurred or deliveries are made. Approximately 65 percent of the \$37.4 billion funded backlog at December 31, 2008, is expected to be converted into sales in 2009. Total U.S. Government orders, including those made on behalf of foreign governments, comprised 90 percent, 89 percent, and 90 percent of the funded backlog at the end of 2008, 2007, and 2006, respectively. Total foreign customer orders accounted for 7 percent, 6 percent, and 5 percent of the funded backlog at the end of 2008, 2007, and 2006, respectively. Domestic commercial backlog represented 3 percent, 5 percent, and 5 percent of funded backlog at the end of 2008, 2007, and 2006, respectively.

**Table of Contents****NORTHROP GRUMMAN CORPORATION****New Awards**

The value of new contract awards during the year ended December 31, 2008, was approximately \$48.3 billion. Significant new awards during this period include \$5.6 billion for the *Virginia*-class Block III submarine programs, \$5.1 billion for the *Gerald R. Ford* (CVN 78) aircraft carrier, \$1.4 billion for the DDG 1000 Zumwalt-class destroyer, \$1.2 billion for the BAMS Unmanned Aircraft System program, \$402 million for the VIS IDIQ, \$385 million for the ICBM program, and various restricted programs.

On February 29, 2008, the company won a \$1.5 billion contract award by the U.S. Air Force as an initial step to replace its aerial refueling tanker fleet. The losing bidder for the contract protested the award decision by the U.S. Air Force. In the fourth quarter, the company reduced total backlog by \$1.5 billion to reflect the termination of the U.S. Air Force refueling tanker program.

The value of new contract awards during the year ended December 31, 2007, was approximately \$35.1 billion. Significant new awards during this period include \$2.4 billion for NPOESS, \$2.2 billion for LHA-6, \$1 billion for LPD-25, \$875 million for the Flats Sequencing Systems/ Postal Automation program, \$636 million for the UCAS-D, \$628 million for the DDG 1000 Zumwalt-class destroyer program, \$607 million for the ICBM program, \$272 million for the JRDC program, \$234 million for the F-22 program, and various restricted programs.

**LIQUIDITY AND CAPITAL RESOURCES**

The company endeavors to ensure the most efficient conversion of operating results into cash for deployment in growing its businesses and maximizing shareholder value. The company actively manages its capital resources through working capital improvements, capital expenditures, strategic business acquisitions, investment in independent research and development, debt repayments, required and voluntary pension contributions, and returning cash to its shareholders through dividend payments and repurchases of common stock.

Company management uses various financial measures to assist in capital deployment decision making including net cash provided by operations, free cash flow, net debt-to-equity, and net debt-to-capital. Management believes these measures are useful to investors in assessing the company's financial performance.

The table below summarizes key components of cash flow provided by operating activities.

\$ in millions	Year Ended December 31		
	2008	2007	2006
Net (loss) earnings	\$ (1,262)	\$ 1,790	\$ 1,542
Non-cash income and expense <sup>(1)</sup>	1,005	1,035	1,036
Goodwill impairment	3,060		
Retiree benefit funding in excess of expense	(167)	(50)	(772)
Trade working capital reduction	308	156	166
Income taxes payable	241	(59)	(68)
Other	23	43	(50)
Cash used in discontinued operations	3	(25)	(98)
Net cash provided by operating activities	\$ 3,211	\$ 2,890	\$ 1,756

(1) Includes depreciation & amortization, stock based compensation expense and deferred taxes.

**Free Cash Flow**

Free cash flow represents cash from operating activities less capital expenditures and outsourcing contract and related software costs. The company believes free cash flow is a useful measure for investors as it reflects the ability of the company to grow by funding strategic business acquisitions and return value to shareholders through repurchasing its shares and paying dividends.

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Free cash flow is not a measure of financial performance under U.S. GAAP, and may not be defined and calculated by other companies in the same manner. This measure should not be considered in isolation or as an alternative to operating results presented in accordance with U.S. GAAP as indicators of performance.

The table below reconciles net cash provided by operating activities to free cash flow:

<i>\$ in millions</i>	Year Ended December 31		
	<b>2008</b>	2007	2006
Net cash provided by operating activities	<b>\$ 3,211</b>	\$ 2,890	\$ 1,756
Less:			
Capital expenditures	<b>(681)</b>	(682)	(732)
Outsourcing contract & related software costs	<b>(110)</b>	(137)	(77)
Free cash flow from operations	<b>\$ 2,420</b>	\$ 2,071	\$ 947

**Cash Flows**

The following is a discussion of the company's major operating, investing and financing activities for each of the three years in the period ended December 31, 2008, as classified on the consolidated statements of cash flows located in Part II, Item 8.

**Operating Activities**

**2008** Net cash provided by operating activities increased \$321 million as compared with 2007, and reflects lower income tax payments and continued trade working capital reductions. Pension plan contributions totaled \$320 million in 2008, of which \$200 million was voluntarily pre-funded, and were comparable to 2007. Net cash provided by operating activities for 2008 included \$113 million of federal and state income tax refunds and \$23 million of interest income.

In 2009, the company expects to contribute the required minimum funding level of approximately \$126 million to its pension plans and approximately \$178 million to its other postretirement benefit plans and also expects to make additional voluntary pension contributions of approximately \$250 million in each of the first and third quarters. For 2009, cash generated from operations is expected to be sufficient to service debt and contract obligations, finance capital expenditures, continue acquisition of shares under the share repurchase program, and continue paying dividends to the company's shareholders. Although 2009 cash from operations is expected to be sufficient to service these obligations, the company may borrow under credit facilities to accommodate timing differences in cash flows. The company has a committed \$2 billion revolving credit facility that is currently undrawn and that can be accessed on a same-day basis. Additionally, were longer-term funding to be desired, the company believes it could, under current market conditions, access the capital markets for debt financing.

**2007** Cash provided by operating activities increased \$1.1 billion as compared with 2006, and reflects lower pension contributions, higher net income, and continued trade working capital reductions. Pension plan contributions totaled \$342 million in 2007, of which \$200 million was voluntarily pre-funded compared with contributions of \$1.2 billion in 2006, of which \$800 million was voluntarily pre-funded. Net cash provided by operating activities for 2007 included the receipt of \$125 million of insurance proceeds related to Hurricane Katrina, \$52 million of federal and state income tax refunds, and \$21 million of interest income.

2006 Cash provided by operating activities decreased \$0.9 billion as compared with 2005. The decrease was primarily due to contributions to the company's pension plans totaling \$1.2 billion, of which \$800 million was voluntarily pre-funded, as compared to contributions of \$415 million in 2005, of which \$203 million was voluntarily pre-funded. Net cash from operating activities for 2006 included the receipt of \$100 million of insurance proceeds related to Hurricane Katrina, \$60 million of federal and state income tax refunds, and \$45 million of interest income.

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**Table of Contents**

**NORTHROP GRUMMAN CORPORATION**

**Investing Activities**

*2008* Cash used in investing activities was \$626 million in 2008. During 2008, the company received \$175 million in proceeds from the sale of the Electro-Optical Systems business, spent \$92 million for the acquisition of 3001 International, Inc. (see Notes 5 and 6 to the consolidated financial statements in Part II, Item 8), paid \$110 million for outsourcing costs related to outsourcing services contracts, and released \$61 million of restricted cash related to the Gulf Opportunity Zone Industrial Development Revenue Bonds (see Note 14 to the consolidated financial statements in Part II, Item 8). The company has \$11 million in restricted cash as of December 31, 2008 related to the Xinetics Inc. purchase (see Note 5 to the consolidated financial statements in Part II, Item 8).

Capital expenditures in 2008 were \$681 million and include \$23 million of capitalized software costs. Capital expenditure commitments at December 31, 2008 were approximately \$554 million, which are expected to be paid with cash on hand.

*2007* Cash used in investing activities was \$1.4 billion in 2007. During 2007, the company acquired Essex Corporation, Xinetics and the remaining 61 percent of Scaled Composites, LLC for approximately \$690 million (see Note 5 to the consolidated financial statements in Part II, Item 8), paid \$137 million for outsourcing costs related to newly acquired outsourcing services contracts, and released \$70 million of restricted cash related to the Gulf Opportunity Zone Industrial Development Revenue Bonds (see Note 14 to the consolidated financial statements in Part II, Item 8) of which \$60 million remained restricted as of December 31, 2007. This was partially offset by \$11 million new restrictions related to the Xinetics purchase.

Capital expenditures in 2007 were \$682 million, including \$118 million to replace property damaged by Hurricane Katrina and \$47 million of capitalized software costs.

*2006* Cash used in investing activities was \$601 million in 2006. During 2006, the company received \$209 million from the sale of the remaining 9.7 million of its TRW Auto common shares, received \$117 million of insurance proceeds related to Hurricane Katrina, received \$43 million from the sales of the Interconnect Technologies assembly business unit and Winchester, paid \$77 million for outsourcing costs related to newly acquired outsourcing services contracts, and paid \$35 million for the purchase of an investment. Also during 2006, Shipbuilding received access to \$200 million from the issuance of Gulf Opportunity Zone Industrial Development

Revenue Bonds (see Note 14 to the consolidated financial statements in Part II, Item 8) of which \$127 million remained restricted as of December 31, 2006.

Capital expenditures in 2006 were \$732 million, including \$111 million to replace property damaged by Hurricane Katrina and \$36 million of capitalized software costs.

**Financing Activities**

*2008* Cash used in financing activities for the year ended December 31, 2008, was \$2 billion compared to \$1.5 billion in the same period of 2007. The \$532 million increase is primarily due to \$380 million more for common stock purchases and \$171 million lower proceeds from stock option exercises. See Note 8 to the consolidated financial statements in Part II, Item 8 for a discussion concerning the company's common stock repurchases.

*2007* Cash used in financing activities for the year ended December 31, 2007, was \$1.5 billion compared to \$1.7 billion in the same period of 2006. The \$233 million decrease is primarily due to \$922 million lower net repayments of long-term debt, partially offset by \$350 million more common stock repurchases, \$119 million lower



proceeds from stock option exercises, \$113 million higher net payments under lines of credits, and \$102 million for higher dividends paid.

2006 Cash used in financing activities for the year ended December 31, 2006 was \$1.7 billion compared to \$1.4 billion in the same period of 2005. The \$348 million increase is primarily due to \$980 million higher net

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repayments of long-term debt, partially offset by \$385 million lower common stock repurchases and \$230 million higher proceeds from exercises of stock options.

*Share Repurchases* The table below summarizes the company's share repurchases beginning January 1, 2006:

Authorization Date	Amount	Average	Total	Date Completed	Shares Repurchased		
	Authorized (in millions)	Price Per Share	Retired (in millions)		(in millions)		
October 24, 2005	\$ 1,500	\$ 65.08	23.0	February 2007	<b>2008</b>	2007	2006
December 14, 2006	1,000	75.96	13.1	November 2007		2.3	11.6
December 19, 2007	2,500	72.55	21.4			13.1	
					<b>21.4</b>		
					<b>21.4</b>	15.4	11.6

Share repurchases take place at management's discretion or under pre-established non-discretionary programs from time to time, depending on market conditions, in the open market, and in privately negotiated transactions. The company retires its common stock upon repurchase and has not made any purchases of common stock other than in connection with these publicly announced repurchase programs. As of December 31, 2008, the company has authorized \$945 million for share repurchases.

**Credit Ratings**

The company's credit ratings at December 31, 2008, are summarized below:

	Fitch	Moody's	Standard & Poors
Long-term: Northrop Grumman	BBB+	Baa1	BBB+

In June 2007, Moody's Investors Service upgraded its ratings on debt securities issued by the company. The long term rating was changed to Baa1 from Baa2. In December 2007, Fitch revised its outlook on the company to stable from positive.

**Credit Facility**

The company has a revolving credit agreement which provides for a five-year revolving credit facility in an aggregate principal amount of \$2 billion and a maturity date of August 10, 2012. The credit facility permits the company to request additional lending commitments from the lenders under the agreement or other eligible lenders under certain circumstances, and thereby increase the aggregate principal amount of the lending commitments under the agreement by up to an additional \$500 million. The company's credit agreement contains certain financial covenants relating to a maximum debt to capitalization ratio, and certain restrictions on additional asset liens, unless permitted by the agreement. As of December 31, 2008, the company was in compliance with all covenants.

At December 31, 2008, and 2007, there was no balance outstanding under this facility. There was a maximum of \$300 million and \$350 million borrowed under this facility during 2008 and 2007, respectively.

**Other Sources and Uses of Capital**

*Additional Capital* To provide for long-term liquidity, the company believes it can obtain additional capital, if necessary, from such sources as the public or private capital markets, the sale of assets, sale and leaseback of operating assets, and leasing rather than purchasing new assets. The company has an effective shelf registration on file with the SEC.

Cash on hand at the beginning of the year plus cash generated from operations and cash available under credit lines are expected to be sufficient in 2009 to service debt, finance capital expansion projects, pay federal, foreign, and state income taxes, fund pension and other post retirement benefit plans, and continue paying dividends to shareholders. The company will continue to provide the productive capacity to perform its existing contracts, prepare for future contracts, and conduct research and development in the pursuit of developing opportunities.

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While these expenditures tend to limit short-term liquidity, they are made with the intention of improving the long-term growth and profitability of the company.

*Financial Arrangements* In the ordinary course of business, the company uses standby letters of credit and guarantees issued by commercial banks and surety bonds issued by insurance companies principally to guarantee the performance on certain contracts and to support the company's self-insured workers' compensation plans. At December 31, 2008, there were \$489 million of unused stand-by letters of credit, \$134 million of bank guarantees, and \$459 million of surety bonds outstanding.

In December 2006, the company guaranteed a \$200 million loan made to Shipbuilding in connection with certain Gulf Opportunity Zone Industrial Revenue Bonds. Under the loan agreement the company guaranteed repayment by Shipbuilding of the principal and interest to the Trustee. The company also guaranteed payment of the principal and interest by the Trustee to the underlying bondholders.

**Contractual Obligations**

The following table presents the company's contractual obligations as of December 31, 2008, and the estimated timing of future cash payments:

<i>\$ in millions</i>	Total	2009	2010 - 2011	2012 - 2013	2014 and beyond
Long-term debt	\$ 3,888	\$ 477	\$ 874	\$ 4	\$ 2,533
Interest payments on long-term debt	3,501	284	463	376	2,378
Operating leases	2,060	459	636	403	562
Purchase obligations <sup>(1)</sup>	7,546	5,254	1,984	283	25
Other long-term liabilities <sup>(2)</sup>	1,192	161	447	170	414
Total contractual obligations	\$ 18,187	\$ 6,635	\$ 4,404	\$ 1,236	\$ 5,912

(1) A purchase obligation is defined as an agreement to purchase goods or services that is enforceable and legally binding on the company and that specifies all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum, or variable price provisions; and the approximate timing of the transaction. These amounts are primarily comprised of open purchase order commitments to vendors and subcontractors pertaining to funded contracts.

(2) Other long-term liabilities primarily consist of accrued workers' compensation, deferred compensation, and other miscellaneous liabilities, but exclude obligations for uncertain tax positions of \$395 million, as the timing of the payments cannot be reasonably estimated.

The table above also excludes estimated minimum funding requirements and expected voluntary contributions for retiree benefit plans as set forth by ERISA in relation to the company's pension and postretirement benefit obligations totaling approximately \$5.5 billion over the next five years: \$804 million in 2009, \$412 million in 2010, \$1,233 million in 2011, \$1,609 million in 2012, and \$1,432 million in 2013. The company also has payments due under plans that are not required to be funded in advance, but are funded on a pay-as-you-go basis. See Note 17 to the consolidated financial statements in Part II, Item 8.

Further details regarding long-term debt and operating leases can be found in Notes 14 and 16, respectively, to the consolidated financial statements in Part II, Item 8.

## **OTHER MATTERS**

### **New Accounting Pronouncements**

New accounting pronouncements have been issued by the FASB which are not effective until after December 31, 2008. For further discussion of new accounting standards, see Note 2 to the consolidated financial statements in Part II, Item 8.

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**NORTHROP GRUMMAN CORPORATION**

**Off-Balance Sheet Arrangements**

As of December 31, 2008, the company had no significant off-balance sheet arrangements other than operating leases. For a description of the company's operating leases, see Note 16 to the consolidated financial statements in Part II, Item 8.

**GLOSSARY OF PROGRAMS**

Listed below are brief descriptions of the programs mentioned in this Form 10-K.

<b>Program Name</b>	<b>Program Description</b>
Advanced Extremely High Frequency (AEHF)	Provide the communication payload for the nation's next generation military strategic and tactical relay systems that will deliver survivable, protected communications to U.S. forces and selected allies worldwide.
Air Mobility Tanker	Program to replace the U.S. Air Force aerial refueling tanker fleet.
Airborne Laser (ABL)	Design and develop the system's Chemical Oxygen Iodine Laser (COIL) and the Beacon Illuminator Laser (BILL) for Missile Defense Agency's Airborne Laser, providing a capability to destroy boost-phase missiles at very long range.
B-2 Stealth Bomber	Maintain strategic, long-range multi-role bomber with war-fighting capability that combines long range, large payload, all-aspect stealth, and near-precision weapons in one aircraft.
Broad Area Maritime Surveillance (BAMS) Unmanned Aerial System	A maritime derivative of the Global Hawk that provides persistent maritime Intelligence, Surveillance, and Reconnaissance (ISR) data collection and dissemination capability to the Maritime Patrol and Reconnaissance Force.
Command Post Platform (CPP)	Provide a family of vehicles that host multiple battle command and support software suites as well as communications equipment that interface with digitized vehicles.
Counter Rocket Artillery Mortar (CRAM)	Provide system engineering and installation support for Counter Rocket, Artillery and Mortar Systems to protect troops at Forward Operating base for Operation Iraqi Freedom.
CVN 78 Ford Class	Design and construction for the new class of Aircraft Carriers.
DDG 1000 Zumwalt-class Destroyer	Design and participate in the production of the U.S. Navy's multi-mission surface combatants tailored for land attack and littoral dominance.
DDG 51	Build Aegis guided missile destroyer, equipped for conducting anti-air, anti-submarine, anti-surface and strike operations.

Deepwater Modernization Program	Multi-year program to modernize and replace the Coast Guard's aging ships and aircraft, and improve command and control and logistics systems. The company has design and production responsibility for surface ships
E-2D Advanced Hawkeye	The E-2 Hawkeye is the U.S. Navy's airborne battle management command and control mission system platform providing airborne early warning detection, identification, tracking, targeting, and communication capabilities. The company is currently performing on a follow-on multi-year contract for eight E-2C aircraft to be delivered to the U.S. Navy through 2009 (two

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**NORTHROP GRUMMAN CORPORATION**

<b>Program Name</b>	<b>Program Description</b>
	aircraft delivered in 2006 and two aircraft delivered in 2007 and two aircraft delivered in 2008). The company is developing the next generation capability including radar, mission computer, vehicle, and other system enhancements called the E-2D Advanced Hawkeye under an SDD contract with the U.S. Navy. The E-2D builds upon the Hawkeye 2000 configuration with significant radar improvement performance. The E-2D provides over the horizon airborne early warning (AEW), surveillance, tracking, and command and control capability to the U.S. Naval Battle Groups and Joint Forces. Pilot Production of three aircraft was authorized in 2007 and long lead funding for the first lot of Low Rate Initial Production (two aircraft) was received in December 2007.
F/A-18	Produce the center and aft fuselage sections, twin vertical stabilizers, and integrate all associated subsystems for the F/A-18 Hornet strike fighters.
F-15 Repairs at Warner Robins	Avionics component repair, modifications, build to print, DMS resolution, ATE builds, engineering services, and personnel augmentation for the F-15.
F-16 Block 60	Direct commercial firm fixed-price program with Lockheed Martin Aeronautics Company to develop and produce 80 Lot systems for aircraft delivery to the United Arab Emirates Air Force as well as test equipment and spares to be used to support in- country repairs of sensors.
F-35 Development (Lightning II)	Design, integration, and/or development of the center fuselage and weapons bay, communications, navigations, identification subsystem, systems engineering, and mission systems software as well as provide ground and flight test support, modeling, simulation activities, and training courseware.
Falcon Edge	Provide an integrated Electronic Warfare suite that leverages the latest radio frequency (RF) and digital technologies for air warfare.
Flats Sequencing System/Postal Automation	Build systems for the U.S. Postal Service designed to further automate the flats mail stream, which includes large envelopes, catalogs and magazines.
Force XXI Battle Brigade and Below (FBCB2)	Install in Army vehicles a system of computer hardware and software that forms a wireless, tactical Internet for near-real- time situational awareness and command and control on the battlefield.
<i>George H. W. Bush</i> (CVN 77)	The 10th and final <i>Nimitz</i> -class aircraft carrier that will incorporate many new design features, with expected delivery to the Navy in early 2009.
Global Hawk High-Altitude, Long-Endurance Systems (HALE)	Provide the Global Hawk HALE unmanned aerial system for use in the global war on terror and has a central role in Intelligence, Reconnaissance, and Surveillance supporting operations in Afghanistan and Iraq.



Ground/Air Task Oriented  
Radar (G/ATOR)

A development program to provide the next generation ground based multi-mission radar for the USMC. Provides Short Range Air Defense, Air Defense Surveillance, Ground Weapon Location and Air Traffic Control. Replaces five existing USMC single- mission radars.

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**NORTHROP GRUMMAN CORPORATION**

<b>Program Name</b>	<b>Program Description</b>
Ground-Based Midcourse Defense Fire Control and Communications (GFC/C)	Develop software to coordinate sensor and interceptor operations during missile flight.
Hunter CLS	Operate, maintain, train and sustain the multi-mission Hunter Unmanned Aerial System in addition to deploying Hunter support teams.
Intercontinental Ballistic Missile (ICBM)	Maintain readiness of the nation's ICBM weapon system.
James Webb Space Telescope (JWST)	Design, develop, integrate and test a space-based infrared telescope satellite to observe the formation of the first stars and galaxies in the universe.
Joint Base Operations Support	Provides all infrastructure support needed for launch and base operations at the NASA Spaceport.
Joint National Integration Center Research & Development (JRDC)	Support the development and application of modeling and simulation, wargaming, test and analytic tools for air and missile defense.
Kinetic Energy Interceptor (KEI)	Develop mobile missile-defense system with the unique capability to destroy a hostile missile during its boost, ascent or midcourse phase of flight.
Large Aircraft Infrared Counter-measures Indefinite Delivery and Indefinite Quantity (LAIRCM IDIQ)	Infrared countermeasures systems for C-17 and C-130 aircraft. The IDIQ contract will further allow for the purchase of LAIRCM hardware for foreign military sales and other government agencies.
LHA	Detail design and construct amphibious assault ships for use as an integral part of joint, interagency, and multinational maritime forces.
LHD	Build multipurpose amphibious assault ships.
LPD	Build amphibious transport dock ships.
MESA Korea	Consists of a 4 lot Multirole Electronically Scanned Array (MESA) radar/Identification Friend or Foe subsystem delivery with limited non-recurring engineering. The program also includes associated spares, support equipment and installation & check out activities, with direct and indirect offset projects. Northrop Grumman's customer is the Boeing Company, with ultimate product delivery to the Republic of Korea Air Force.

Multi-Platform Radar  
Technology Insertion Program  
(MP- RTIP)

Design, develop, fabricate and test modular, scalable 2- dimensional active electronically scanned array (2D-AESA) radars for integration on the Global Hawk Airborne platforms. Also provides enhanced Wide Area Surveillance system capabilities.

National Polar-orbiting  
Operational Environmental  
Satellite System (NPOESS)

Design, develop, integrate, test, and operate an integrated system comprised of two satellites with mission sensors and associated ground elements for providing global and regional weather and environmental data.

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**NORTHROP GRUMMAN CORPORATION**

<b>Program Name</b>	<b>Program Description</b>
National Security Cutter (NSC)	Detail design and construct the U.S. Coast Guard's National Security Cutters equipped to carry out the core missions of maritime security, maritime safety, protection of natural resources, maritime mobility, and national defense.
National Team Battle Management Command and Control (BMC2)	The National Team Battle Management Command and Control Program supports the objective of the Missile Defense Agency by providing an integrated and layered Ballistic Missile Defense System (BMDS) architecture, developing block technical definitions, developing element requirements, schedules, verification strategies and other products required to execute the BMDS program.
Navstar Global Positioning System (GPS) Operational Control Segment (OCX)	Provide all satellite command and control (C2), mission planning, constellation management, external interfaces, monitoring stations, and ground antennas.
Nevada Test Site (NTS)	Manage and operate the Nevada Test Site facility and provide infrastructure support, including management of the nuclear explosives safety team, support of hazardous chemical spill testing, emergency response training and conventional weapons testing.
New York City Wireless	Provide New York City's broadband public- safety wireless network.
San Diego County IT Outsourcing	Provide high-level IT consulting and services to San Diego County including data center, help desk, desktop, network, applications and cross-functional services.
Space Based Space Surveillance (SBSS)	Develop initial capability for space-based surveillance of resident space objects for missions such as deep space and near earth object detection and tracking, deep space search, space object identification, and monitoring of satellites.
Space Tracking and Surveillance System (STSS)	Develop a critical system for the nation's missile defense architecture employing low-earth orbit satellites with onboard infrared sensors to detect, track and discriminate ballistic missiles. The program includes two flight demonstration satellites with subsequent development and production blocks of satellites.
Unmanned Combat Air System Carrier Demonstration (UCAS-D)	Navy development/demonstration contract that will design, build and test two demonstration vehicles that will conduct a carrier demonstration.
<i>USS Carl Vinson</i>	Refueling and complex overhaul of the nuclear-powered aircraft carrier <i>USS Carl Vinson</i> (CVN 70).

<i>USS Enterprise</i> Extended Dry-docking Selected Restricted Availability (EDSRA)	Provide routine dry dock work, tank blasting and coating, hull preservation, propulsion and ship system repairs and limited enhancements to various hull, mechanical and electrical systems for the <i>USS Enterprise</i> .
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<i>USS Theodore Roosevelt</i>	Refueling and complex overhaul of the nuclear-powered aircraft carrier <i>USS Theodore Roosevelt</i> .
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**NORTHROP GRUMMAN CORPORATION**

<b>Program Name</b>	<b>Program Description</b>
V(9) New Fighter Aircraft	Upgraded F-16 fire control radar system. The system consists of the following Line Replaceable Units: Antenna, Medium Duty Transmitter, Modular Receiver Exciter, and Common Radar Processor. The system is being procured for foreign military sales customers through the F-16 Systems Group at Wright Patterson Air Force Base in Dayton, Ohio.
Vehicular Intercommunications Systems (VIS)	Provide clear and noise-free communications between crew members inside combat vehicles and externally over as many as six combat net radios for the U.S. Army. The active noise- reduction features of VIS provide significant improvement in speech intelligibility, hearing protection, and vehicle crew performance.
Virginia IT outsourcing	Provide high-level IT consulting and services to Virginia state and local agencies including data center, help desk, desktop, network, applications and cross-functional services.
Virginia-class Submarines (VCS)	Construct the newest attack submarine in conjunction with Electric Boat.
Wedgetail	Joint program with Boeing to supply MESA radar antenna for advanced early warning and control aircraft.

**Item 7A. Quantitative and Qualitative Disclosures about Market Risk**

*Interest Rates* The company is exposed to market risk, primarily related to interest rates and foreign currency exchange rates. Financial instruments subject to interest rate risk include fixed-rate long-term debt obligations, variable-rate short-term borrowings under the credit agreement, short-term investments, and long-term notes receivable. At December 31, 2008, substantially all outstanding borrowings were fixed-rate long-term debt obligations of which a significant portion are not callable until maturity. The company has a modest exposure to interest rate risk resulting from four interest rate swap agreements described in Note 1 to the consolidated financial statements in Part II, Item 8. During 2008, the company entered into two forward-starting interest rate swap agreements with a notional value totaling \$400 million. The company designated these swaps as cash flow hedges associated with future interest rate exposure on \$400 million of financing expected to occur in 2009. The company's sensitivity to a 1 percent change in interest rates is tied to its \$2 billion credit agreement, which had no balance outstanding at December 31, 2008 or 2007, and the aforementioned interest rate swap agreements. See Note 14 to the consolidated financial statements in Part II, Item 8.

*Derivatives* The company does not hold or issue derivative financial instruments for trading purposes. The company may enter into interest rate swap agreements to manage its exposure to interest rate fluctuations. At December 31, 2008, and 2007, four and two interest rate swap agreements, respectively, were in effect. See Notes 1 and 12 to the consolidated financial statements in Part II, Item 8.

*Foreign Currency* The company enters into foreign currency forward contracts to manage foreign currency exchange rate risk related to receipts from customers and payments to suppliers denominated in foreign currencies. At December 31, 2008, and 2007, the amount of foreign currency forward contracts outstanding was not material. The company does not consider the market risk exposure relating to foreign currency exchange to be material to the consolidated financial statements. See Notes 1 and 12 to the consolidated financial statements in Part II, Item 8.

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**NORTHROP GRUMMAN CORPORATION**

**Item 8. Financial Statements and Supplementary Data**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON THE CONSOLIDATED FINANCIAL STATEMENTS**

To the Board of Directors and Shareholders of  
Northrop Grumman Corporation  
Los Angeles, California

We have audited the accompanying consolidated statements of financial position of Northrop Grumman Corporation and subsidiaries (the Company) as of December 31, 2008 and 2007, and the related consolidated statements of operations and comprehensive (loss) income, changes in shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2008. Our audits also included the financial statement schedule listed in the Index at Item 15. These financial statements and the financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Northrop Grumman Corporation and subsidiaries at December 31, 2008 and 2007, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2008, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

As discussed in Note 13 to the consolidated financial statements, the Company adopted, effective January 1, 2007, a new accounting standard for income taxes. As discussed in Note 17 to the consolidated financial statements, the Company adopted, effective December 31, 2006, a new accounting standard for retirement benefits.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2008, based on the criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 10, 2009 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ Deloitte & Touche LLP  
Los Angeles, California  
February 10, 2009





Table of Contents**NORTHROP GRUMMAN CORPORATION****CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE (LOSS) INCOME**

<i>\$ in millions, except per share amounts</i>	Year Ended December 31		
	2008	2007	2006
Sales and Service Revenues			
Product sales	\$ <b>19,634</b>	\$ 18,577	\$ 18,294
Service revenues	<b>14,253</b>	13,251	11,697
Total sales and service revenues	<b>33,887</b>	31,828	29,991
Cost of Sales and Service Revenues			
Cost of product sales	<b>15,490</b>	14,340	14,275
Cost of service revenues	<b>12,208</b>	11,297	10,220
General and administrative expenses	<b>3,240</b>	3,173	3,002
Goodwill impairment	<b>3,060</b>		
Operating (loss) income	<b>(111)</b>	3,018	2,494
Other (expense) income			
Interest expense	<b>(295)</b>	(336)	(347)
Other, net	<b>38</b>	16	169
(Loss) earnings from continuing operations before income taxes	<b>(368)</b>	2,698	2,316
Federal and foreign income taxes	<b>913</b>	887	723
(Loss) earnings from continuing operations	<b>(1,281)</b>	1,811	1,593
Income (loss) from discontinued operations, net of tax	<b>19</b>	(21)	(51)
Net (loss) earnings	<b>\$ (1,262)</b>	\$ 1,790	\$ 1,542
Basic (loss) Earnings Per Share			
Continuing operations	\$ <b>(3.83)</b>	\$ 5.30	\$ 4.61
Discontinued operations	<b>.06</b>	(.06)	(.15)
Basic (loss) earnings per share	<b>\$ (3.77)</b>	\$ 5.24	\$ 4.46
Weighted-average common shares outstanding, in millions	<b>334.5</b>	341.7	345.7
Diluted (loss) Earnings Per Share			
Continuing operations	\$ <b>(3.83)</b>	\$ 5.18	\$ 4.51
Discontinued operations	<b>.06</b>	(.06)	(.14)
Diluted (loss) earnings per share	<b>\$ (3.77)</b>	\$ 5.12	\$ 4.37

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Weighted-average diluted shares outstanding, in millions	<b>334.5</b>	354.3	358.6
Net (loss) earnings (from above)	<b>\$ (1,262)</b>	\$ 1,790	\$ 1,542
Other comprehensive (loss) income			
Change in cumulative translation adjustment	<b>(24)</b>	12	22
Change in unrealized (loss) gain on marketable securities and cash flow hedges, net of tax benefit (expense) of \$22 in 2008, \$(1) in 2007, and \$2 in 2006	<b>(35)</b>	1	(5)
Reclassification adjustment on write-down of marketable securities, net of tax expense of \$(5)			10
Additional minimum pension liability adjustment, net of tax expense of \$(32)			40
Change in unamortized benefit plan costs, net of tax benefit (expense) of \$1,888 in 2008 and \$(384) in 2007	<b>(2,884)</b>	594	
Other comprehensive (loss) income, net of tax	<b>(2,943)</b>	607	67
Comprehensive (loss) income	<b>\$ (4,205)</b>	\$ 2,397	\$ 1,609

*The accompanying notes are an integral part of these consolidated financial statements.*

Table of Contents**NORTHROP GRUMMAN CORPORATION****CONSOLIDATED STATEMENTS OF FINANCIAL POSITION**

<i>\$ in millions</i>	<b>December 31, 2008</b>	<b>December 31, 2007</b>
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 1,504	\$ 963
Accounts receivable, net	3,904	3,790
Inventoried costs, net	1,003	1,000
Deferred income taxes	549	542
Prepaid expenses and other current assets	229	502
Total current assets	7,189	6,797
<b>Property, Plant, and Equipment</b>		
Land and land improvements	619	602
Buildings	2,326	2,237
Machinery and other equipment	5,080	4,749
Leasehold improvements	588	526
	8,613	8,114
Accumulated depreciation	(3,803)	(3,424)
Property, plant, and equipment, net	4,810	4,690
<b>Other Assets</b>		
Goodwill	14,518	17,672
Other purchased intangibles, net of accumulated amortization of \$1,795 in 2008 and \$1,687 in 2007	947	1,074
Pension and postretirement benefits asset	290	2,080
Long-term deferred tax asset	1,510	65
Miscellaneous other assets	933	995
Total other assets	18,198	21,886
<b>Total assets</b>	<b>\$ 30,197</b>	<b>\$ 33,373</b>

**Table of Contents****NORTHROP GRUMMAN CORPORATION**

<i>\$ in millions</i>	<b>December 31, 2008</b>	<b>December 31, 2007</b>
<b><i>Liabilities and Shareholders' Equity</i></b>		
<b>Current Liabilities</b>		
Notes payable to banks	\$ 24	\$ 26
Current portion of long-term debt	477	111
Trade accounts payable	1,943	1,890
Accrued employees' compensation	1,284	1,175
Advance payments and billings in excess of costs incurred	2,036	1,563
Other current liabilities	1,660	1,667
 Total current liabilities	 7,424	 6,432
 Long-term debt, net of current portion	 3,443	 3,918
Mandatorily redeemable preferred stock		350
Pension and postretirement benefits liability	5,823	3,008
Other long-term liabilities	1,587	1,978
 Total liabilities	 18,277	 15,686
 <b>Commitments and Contingencies (Note 16)</b>		
<b>Shareholders' Equity</b>		
Common stock, \$1 par value; 800,000,000 shares authorized; issued and outstanding: 2008 327,012,663; 2007 337,834,561	327	338
Paid-in capital	9,645	10,661
Retained earnings	5,590	7,387
Accumulated other comprehensive loss	(3,642)	(699)
 Total shareholders' equity	 11,920	 17,687
 <b>Total liabilities and shareholders' equity</b>	 <b>\$ 30,197</b>	 <b>\$ 33,373</b>

*The accompanying notes are an integral part of these consolidated financial statements.*

**Table of Contents****NORTHROP GRUMMAN CORPORATION****CONSOLIDATED STATEMENTS OF CASH FLOWS**

<i>\$ in millions</i>	Year Ended December 31		
	2008	2007	2006
<b>Operating Activities</b>			
Sources of Cash Continuing Operations			
Cash received from customers			
Progress payments	\$ 7,818	\$ 7,312	\$ 6,670
Collections on billings	26,938	24,570	23,303
Insurance proceeds received	5	125	100
Other cash receipts	83	34	42
Total sources of cash continuing operations	34,844	32,041	30,115
Uses of Cash Continuing Operations			
Cash paid to suppliers and employees	(30,566)	(27,835)	(27,242)
Interest paid, net of interest received	(287)	(334)	(321)
Income taxes paid, net of refunds received	(719)	(853)	(618)
Excess tax benefits from stock-based compensation	(48)	(52)	(57)
Payments for litigation settlements	(4)	(33)	(11)
Other cash payments	(12)	(19)	(12)
Total uses of cash continuing operations	(31,636)	(29,126)	(28,261)
Cash provided by continuing operations	3,208	2,915	1,854
Cash provided by (used in) discontinued operations	3	(25)	(98)
Net cash provided by operating activities	3,211	2,890	1,756
<b>Investing Activities</b>			
Proceeds from sale of businesses, net of cash divested	175		43
Payments for businesses purchased, net of cash acquired	(92)	(690)	
Proceeds from sale of property, plant, and equipment	19	22	21
Additions to property, plant, and equipment	(681)	(682)	(732)
Payments for outsourcing contract costs and related software costs	(110)	(137)	(77)
Proceeds from insurance carriers related to capital expenditures		4	117
Proceeds from sale of investments			209
Payment for purchase of investment			(35)
Decrease (increase) in restricted cash	61	59	(127)
Other investing activities, net	2	(6)	(20)
Net cash used in investing activities	(626)	(1,430)	(601)
<b>Financing Activities</b>			
Net (payments) borrowings under lines of credit	(2)	(69)	44

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Proceeds from issuance of long-term debt			200
Principal payments of long-term debt	(113)	(90)	(1,212)
Proceeds from exercises of stock options and issuances of common stock	103	274	393
Dividends paid	(525)	(504)	(402)
Excess tax benefits from stock-based compensation	48	52	57
Common stock repurchases	(1,555)	(1,175)	(825)
Net cash used in financing activities	(2,044)	(1,512)	(1,745)
Increase (decrease) in cash and cash equivalents	541	(52)	(590)
Cash and cash equivalents, beginning of year	963	1,015	1,605
Cash and cash equivalents, end of year	\$ 1,504	\$ 963	\$ 1,015

*The accompanying notes are an integral part of these consolidated financial statements.*

Table of Contents**NORTHROP GRUMMAN CORPORATION****CONSOLIDATED STATEMENTS OF CASH FLOWS**

<i>\$ in millions</i>	Year Ended December 31		
	2008	2007	2006
<b>Reconciliation of Net (Loss) Earnings to Net Cash Provided by Operating Activities</b>			
Net (Loss) Earnings	\$ (1,262)	\$ 1,790	\$ 1,542
Adjustments to reconcile to net cash provided by operating activities			
Depreciation	572	575	567
Amortization of assets	189	152	136
Impairment of goodwill	3,060		
Stock-based compensation	118	196	184
Excess tax benefits from stock-based compensation	(48)	(52)	(57)
Loss on disposals of property, plant, and equipment	13	19	6
Impairment of property, plant, and equipment damaged by Hurricane Katrina			37
Amortization of long-term debt premium	(9)	(11)	(14)
Pre-tax gain on sale of businesses	(58)		(9)
Pre-tax gain on sale of investments		(23)	(96)
Decrease (increase) in			
Accounts receivable	(351)	(6,475)	(2,228)
Inventoried costs	(521)	4	(70)
Prepaid expenses and other current assets	(21)	9	(10)
Increase (decrease) in			
Progress payments	764	6,513	2,261
Accounts payable and accruals	416	114	203
Deferred income taxes	183	175	183
Income taxes payable	241	(59)	(68)
Retiree benefits	(167)	(50)	(772)
Other non-cash transactions, net	89	38	59
Cash provided by continuing operations	3,208	2,915	1,854
Cash provided by (used in) discontinued operations	3	(25)	(98)
Net cash provided by operating activities	\$ 3,211	\$ 2,890	\$ 1,756
<b>Non-Cash Investing and Financing Activities</b>			
Investment in unconsolidated affiliate		\$ 30	
Sale of business			
Liabilities assumed by purchaser	\$ (18)		
Purchase of businesses			
Liabilities assumed by the company	\$ 20	\$ 136	
	\$ 350		



Mandatorily redeemable convertible preferred stock converted or  
redeemed into common stock

Capital leases	\$	35
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*The accompanying notes are an integral part of these consolidated financial statements.*

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Table of Contents**NORTHROP GRUMMAN CORPORATION****CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY**

<i>\$ in millions, except per share</i>	Year Ended December 31		
	2008	2007	2006
<b>Common Stock</b>			
At beginning of year	\$ 338	\$ 346	\$ 347
Common stock repurchased	(21)	(15)	(12)
Conversion and redemption of preferred stock	6		
Employee stock awards and options	4	7	11
At end of year	327	338	346
<b>Paid-in Capital</b>			
At beginning of year	10,661	11,346	11,571
Common stock repurchased	(1,534)	(1,160)	(813)
Conversion and redemption of preferred stock	344		
Employee stock awards and options	174	475	588
At end of year	9,645	10,661	11,346
<b>Retained Earnings</b>			
At beginning of year	7,387	6,183	5,055
Net (loss) earnings	(1,262)	1,790	1,542
Adoption of new accounting standards	(3)	(66)	
Dividends	(532)	(520)	(414)
At end of year	5,590	7,387	6,183
<b>Accumulated Other Comprehensive Loss</b>			
At beginning of year	(699)	(1,260)	(145)
Other comprehensive (loss) income, net of tax	(2,943)	607	67
Adjustment to initially apply SFAS No. 158, net of tax of \$838			(1,182)
Adjustment to deferred tax benefit recorded on adoption of SFAS No. 158		(46)	
At end of year	(3,642)	(699)	(1,260)
Total shareholders' equity	\$ 11,920	\$ 17,687	\$ 16,615
Cash dividends declared per share	\$ 1.57	\$ 1.48	\$ 1.16

*The accompanying notes are an integral part of these consolidated financial statements.*



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**NORTHROP GRUMMAN CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

*Nature of Operations* Northrop Grumman Corporation and its subsidiaries (Northrop Grumman or the company) provide technologically advanced, innovative products, services, and solutions in information and services, aerospace, electronics, and shipbuilding. At December 31, 2008, the company was aligned into seven reporting segments categorized into four primary businesses. The Mission Systems, Information Technology, and Technical Services segments are presented as Information & Services. The Integrated Systems and Space Technology segments are presented as Aerospace. The Electronics and Shipbuilding segments are each presented as separate businesses.

*Information & Services* Mission Systems is a leading global systems integrator of complex, mission-enabling systems for government, military, and business clients. Products and services are focused on the fields of Command, Control, Communications, Computers and Intelligence (C4I), missile and air defense, airborne reconnaissance, intelligence management and processing, and decision support systems.

Information Technology is a premier provider of information technology (IT) systems engineering and systems integration for the Department of Defense (DoD), national intelligence, federal, civilian, state and local agencies, and commercial customers.

Technical Services is a leading provider of logistics, infrastructure, and sustainment support, while also providing a wide array of technical services, including training and simulation.

*Aerospace* Integrated Systems is a leader in the design, development, and production of airborne early warning, electronic warfare and surveillance systems, and battlefield management systems, as well as manned and unmanned tactical and strike systems.

Space Technology develops and integrates a broad range of systems at the leading edge of space, defense, and electronics technology. The segment supplies products primarily to the U.S. Government that play an important role in maintaining the nation's security and leadership in science and technology. Space Technology's business areas focus on the design, development, manufacture, and integration of satellite systems and subsystems, electronic and communications payloads, intercontinental ballistic missile systems, and high energy laser systems and subsystems.

*Electronics* is a leading designer, developer, manufacturer and integrator of a variety of advanced electronic and maritime systems for national security and select non-defense applications. Electronics provides systems to U.S. and international customers for such applications as airborne surveillance, aircraft fire control, precision targeting, electronic warfare, automatic test equipment, inertial navigation, integrated avionics, space sensing, intelligence processing, air traffic control, air and missile defense, communications, mail processing, biochemical detection, ship bridge control, and shipboard components.

*Shipbuilding* is the nation's sole industrial designer, builder, and refueler of nuclear-powered aircraft carriers and one of only two companies capable of designing and building nuclear-powered submarines for the U.S. Navy. Shipbuilding is also one of the nation's leading full service systems providers for the design, engineering, construction, and life cycle support of major surface ships for the U.S. Navy, U.S. Coast Guard, international navies, and for commercial vessels of all types.

As prime contractor, principal subcontractor, partner, or preferred supplier, Northrop Grumman participates in many high-priority defense and non-defense technology programs in the U.S. and abroad. Northrop Grumman conducts most of its business with the U.S. Government, principally the DoD. The company is therefore affected by, among other things, the federal budget process. The company also conducts business with local, state, and foreign governments and makes domestic and international commercial sales.

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### **NORTHROP GRUMMAN CORPORATION**

*Principles of Consolidation* The consolidated financial statements include the accounts of Northrop Grumman and its subsidiaries. All intercompany accounts, transactions, and profits among Northrop Grumman and its subsidiaries are eliminated in consolidation.

*Accounting Estimates* The company's financial statements are in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP). The preparation thereof requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingencies at the date of the financial statements as well as the reported amounts of revenues and expenses during the reporting period. Estimates have been prepared on the basis of the most current and best available information and actual results could differ materially from those estimates.

*Revenue Recognition* As a defense contractor engaging in long-term contracts, the majority of the company's business is derived from long-term contracts for the construction of facilities, production of goods, and services provided to the federal government. In accounting for these contracts, the company extensively utilizes the cost-to-cost and the units-of-delivery measures of the percentage-of-completion method of accounting. Sales under cost-reimbursement contracts and construction-type contracts that provide for delivery at a low volume per year or a small number of units after a lengthy period of time over which a significant amount of costs have been incurred are accounted for using the cost-to-cost measure of the percentage-of-completion method of accounting. Under this method, sales, including estimated earned fees or profits, are recorded as costs are incurred. For most contracts, sales are calculated based on the percentage that total costs incurred bear to total estimated costs at completion. For certain contracts with large up-front purchases of material, sales are calculated based on the percentage that direct labor costs incurred bear to total estimated direct labor costs. Sales under construction-type contracts that provide for delivery at a high volume per year are accounted for using the units-of-delivery measure of the percentage-of-completion method of accounting. Under this method, sales are recognized as deliveries are made to the customer generally using unit sales values in accordance with the contract terms. The company estimates profit as the difference between total estimated revenue and total estimated cost of a contract and recognizes that profit over the life of the contract based on deliveries. The company classifies contract revenues as product sales or service revenues depending upon the predominant attributes of the relevant underlying contracts.

Certain contracts contain provisions for price redetermination or for cost and/or performance incentives. Such redetermined amounts or incentives are included in sales when the amounts can reasonably be determined and estimated. Amounts representing contract change orders, claims, requests for equitable adjustment, or limitations in funding are included in sales only when they can be reliably estimated and realization is probable. In the period in which it is determined that a loss will result from the performance of a contract, the entire amount of the estimated ultimate loss is charged against income. Loss provisions are first offset against costs that are included in inventories, with any remaining amount reflected in liabilities. Changes in estimates of contract sales, costs, and profits are recognized using the cumulative catch-up method of accounting. This method recognizes in the current period the cumulative effect of the changes on current and prior periods. Hence, the effect of the changes on future periods of contract performance is recognized as if the revised estimate had been the original estimate. A significant change in an estimate on one or more contracts could have a material adverse effect on the company's consolidated financial position or results of operations.

Revenue under contracts to provide services to non-federal government customers are generally recognized when services are performed. Service contracts include operations and maintenance contracts, and outsourcing-type arrangements, primarily in the Information Technology segment. Revenue under such contracts is generally recognized on a straight-line basis over the period of contract performance, unless evidence suggests that the revenue

is earned or the obligations are fulfilled in a different pattern. Costs incurred under these service contracts are expensed as incurred, except that direct and incremental set-up costs are capitalized and amortized over the life of the agreement. Operating profit related to such service contracts may fluctuate from period to period, particularly in the earlier phases of the contract. Service contracts that include more than one type of product or service are accounted for under the provisions of Emerging Issues Task Force (EITF) Issue

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### **NORTHROP GRUMMAN CORPORATION**

No. 00-21 *Revenue Arrangements with Multiple Deliverables.* Accordingly, for applicable arrangements, revenue recognition includes the proper identification of separate units of accounting and the allocation of revenue across all elements based on relative fair values.

*General and Administrative Expenses* In accordance with industry practice and the regulations that govern the cost accounting requirements for government contracts, most general corporate expenses incurred at both the segment and corporate locations are considered allowable and allocable costs on government contracts. For most components of the company, these costs are allocated to contracts in progress on a systematic basis and contract performance factors include this cost component as an element of cost. General and administrative expenses primarily relate to segment operations.

*Research and Development* Company-sponsored research and development activities primarily include independent research and development (IR&D) efforts related to government programs. IR&D expenses are included in general and administrative expenses and are generally allocated to U.S. Government contracts. Company-sponsored research and development expenses totaled \$576 million, \$534 million, and \$569 million in 2008, 2007, and 2006, respectively. Expenses for research and development sponsored by the customer are charged directly to the related contracts.

*Product Warranty Costs* The company provides certain product warranties that require repair or replacement of non-conforming items for a specified period of time. Most of the company's product warranties are provided under government contracts, the costs of which are incorporated into contract pricing. Accrued product warranty costs of \$71 million and \$78 million were included in other current liabilities at December 31, 2008, and 2007, respectively.

*Environmental Costs* Environmental liabilities are accrued when the company determines it is responsible for remediation costs and such amounts are reasonably estimable. When only a range of amounts is established and no amount within the range is more probable than another, the minimum amount in the range is recorded. Environmental liabilities are recorded on an undiscounted basis. At sites involving multiple parties, the company accrues environmental liabilities based upon its expected share of liability, taking into account the financial viability of other jointly liable parties. Environmental expenditures are expensed or capitalized as appropriate. Capitalized expenditures relate to long-lived improvements in currently operating facilities. The company does not anticipate and record insurance recoveries before collection is probable. At December 31, 2008 and 2007, the company did not have any accrued receivables related to insurance reimbursements or recoveries for environmental matters.

*Derivative Financial Instruments* Derivative financial instruments are recognized as assets or liabilities in the financial statements and measured at fair value. Changes in the fair value of derivative financial instruments that qualify and are designated as fair value hedges are required to be recorded in income from continuing operations, while the effective portion of the changes in the fair value of derivative financial instruments that qualify and are designated as cash flow hedges are recorded in other comprehensive income. The company may use derivative financial instruments to manage its exposure to interest rate and foreign currency exchange risks and to balance its fixed and variable rate long-term debt portfolio. The company does not use derivative financial instruments for trading or speculative purposes, nor does it use leveraged financial instruments. Credit risk related to derivative financial instruments is considered minimal and is managed by requiring high credit standards for its counterparties and periodic settlements.

For derivative financial instruments not designated as hedging instruments, gains or losses resulting from changes in the fair value are reported in Other, net in the consolidated statements of operations and comprehensive (loss) income.



*Other, net* For 2008, Other, net primarily consisted of royalty income from patent infringement settlements at Electronics of \$59 million, partially offset by downward mark to market adjustments on investments in marketable securities. For 2007, Other, net was not significant. For 2006, Other, net primarily consisted of a

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### **NORTHROP GRUMMAN CORPORATION**

pre-tax gain of \$111 million related to the sale of the company's remaining 9.7 million TRW Automotive (TRW Auto) shares. Other, net includes interest income for all periods presented.

**Income Taxes** Provisions for federal, foreign, state, and local income taxes are calculated on reported financial statement pre-tax income based on current tax law and include the cumulative effect of any changes in tax rates from those used previously in determining deferred tax assets and liabilities. Such provisions differ from the amounts currently payable because certain items of income and expense are recognized in different time periods for financial reporting purposes than for income tax purposes. If a tax position does not meet the minimum statutory threshold to avoid payment of penalties, the company recognizes an expense for the amount of the penalty in the period the tax position is claimed in the tax return of the company. The company recognizes interest accrued related to unrecognized tax benefits in income tax expense. Penalties, if probable and reasonably estimable, are recognized as a component of income tax expense. State and local income and franchise tax provisions are allocable to contracts in process and, accordingly, are included in general and administrative expenses.

In accordance with the recognition standards established by Financial Accounting Standards Board (FASB) Interpretation No. (FIN) 48 *Accounting for Uncertainty in Income Taxes* an interpretation of FASB Statement 109, the company makes a comprehensive review of its portfolio of uncertain tax positions regularly. In this regard, an uncertain tax position represents the company's expected treatment of a tax position taken in a filed tax return, or planned to be taken in a future tax return or claim, that has not been reflected in measuring income tax expense for financial reporting purposes. Until these positions are sustained by the taxing authorities, the company has not recognized the tax benefits resulting from such positions and reports the tax effects as a liability for uncertain tax positions in its consolidated statements of financial position.

**Cash and cash equivalents** For cash and cash equivalents and amounts borrowed under the company's short-term credit lines, the carrying amounts approximate fair value due to the short-term nature of these items. Cash and cash equivalents include short-term interest-earning debt instruments that mature in three months or less from the date purchased.

**Marketable Securities** At December 31, 2008, and 2007, substantially all of the company's investments in marketable securities were classified as available-for-sale or trading. For available-for-sale securities, any unrealized gains and losses are reported as a separate component of shareholders' equity. Unrealized gains and losses on trading securities are included in Other, net in the consolidated statements of operations and comprehensive (loss) income. Investments in marketable securities are recorded at fair value.

**Accounts Receivable** Accounts receivable include amounts billed and currently due from customers, amounts currently due but unbilled (primarily related to contracts accounted for under the cost-to-cost measure of the percentage-of-completion method of accounting), certain estimated contract changes, claims or requests for equitable adjustment in negotiation that are probable of recovery, and amounts retained by the customer pending contract completion.

**Inventoried Costs** Inventoried costs primarily relate to work in process under fixed-price, units-of-delivery contracts. These costs represent accumulated contract costs less the portion of such costs allocated to delivered items. Accumulated contract costs include direct production costs, factory and engineering overhead, production tooling costs, and, for government contracts, allowable general and administrative expenses. The ratio of inventoried general and administrative expenses to total inventoried costs is estimated to be the same as the ratio of total general and administrative expenses incurred to total contract costs incurred. According to the provisions of U.S. Government

contracts, the customer asserts title to, or a security interest in, inventories related to such contracts as a result of contract advances, performance-based payments, and progress payments. General corporate expenses and IR&D allocable to commercial contracts are expensed as incurred. In accordance with industry practice, inventoried costs are classified as a current asset and include amounts related to contracts having production cycles longer than one year. Product inventory primarily consists of raw materials and is stated at the lower of cost or market, generally using the average cost method.

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*Outsourcing Contract Costs* Costs on outsourcing contracts, including costs incurred for bid and proposal activities, are generally expensed as incurred. However, certain costs incurred upon initiation of an outsourcing contract are deferred and expensed over the contract life. These costs represent incremental external costs or certain specific internal costs that are directly related to the contract acquisition and transition/set-up. The primary types of costs that may be capitalized include labor and related fringe benefits, subcontractor costs, and travel costs.

*Depreciable Properties* Property, plant, and equipment owned by the company are depreciated over the estimated useful lives of individual assets. Costs incurred for computer software developed or obtained for internal use are capitalized and classified in machinery and other equipment. Most of these assets are depreciated using declining-balance methods, with the remainder using the straight-line method, with the following lives:

	Years
Land improvements	2-45
Buildings and improvements	2-45
Machinery and other equipment	2-25
Capitalized software costs	3-5
Leasehold improvements	Length of lease

*Restricted Cash* Access to proceeds from the Gulf Opportunity Zone Industrial Development Revenue Bonds (see Note 14) is restricted to certain capital expenditures. As such, the amount of unexpended proceeds available as of December 31, 2007, is recorded in miscellaneous other assets as restricted cash in the consolidated statements of financial position. At December 31, 2008, all proceeds were utilized, and no restricted cash related to the Gulf Opportunity Zone Industrial Revenue Bonds remains.

*Leases* The company uses its incremental borrowing rate in the assessment of lease classification as capital or operating and defines the initial lease term to include renewal options determined to be reasonably assured. The company conducts operations primarily under operating leases.

Most lease agreements contain incentives for tenant improvements, rent holidays, or rent escalation clauses. For incentives for tenant improvements, the company records a deferred rent liability and amortizes the deferred rent over the term of the lease as a reduction to rent expense. For rent holidays and rent escalation clauses during the lease term, the company records minimum rental expenses on a straight-line basis over the term of the lease. For purposes of recognizing lease incentives, the company uses the date of initial possession as the commencement date, which is generally when the company is given the right of access to the space and begins to make improvements in preparation of intended use.

*Goodwill and Other Purchased Intangible Assets* The company performs impairment tests for goodwill as of November 30th of each year, or when evidence of potential impairment exists. When it is determined that impairment has occurred, a charge to operations is recorded. Goodwill and other purchased intangible asset balances are included in the identifiable assets of the business segment to which they have been assigned. Any goodwill impairment, as well as the amortization of other purchased intangible assets, is charged against the respective business segments' operating income. Purchased intangible assets are amortized on a straight-line basis over their estimated useful lives (see Note 11).

*Self-Insurance Accruals* Included in other long-term liabilities is approximately \$523 million and \$519 million related to self-insured workers' compensation as of December 31, 2008, and 2007, respectively. The company estimates the required liability of such claims on a discounted basis utilizing actuarial methods based on various assumptions, which include, but are not limited to, the company's historical loss experience and projected loss development factors.

*Litigation, Commitments, and Contingencies* Amounts associated with litigation, commitments, and contingencies are recorded as charges to earnings when management, after taking into consideration the facts and circumstances

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of each matter, including any settlement offers, has determined that it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated.

**Retirement Benefits** The company sponsors various pension plans covering substantially all employees. The company also provides postretirement benefit plans other than pensions, consisting principally of health care and life insurance benefits, to eligible retirees and qualifying dependents. The liabilities and annual income or expense of the company's pension and other postretirement benefit plans are determined using methodologies that involve several actuarial assumptions, the most significant of which are the discount rate, the long-term rate of asset return (based on the market-related value of assets), and medical trend (rate of growth for medical costs). The fair values of plan assets are determined based on prevailing market prices or estimated fair value for investments with no available quoted prices. Not all net periodic pension income or expense is recognized in net earnings in the year incurred because it is allocated to production as product costs, and a portion remains in inventory at the end of a reporting period. The company's funding policy for pension plans is to contribute, at a minimum, the statutorily required amount to an irrevocable trust.

**Stock Compensation** The company accounts for stock compensation in accordance with Statement of Financial Accounting Standards (SFAS) No. 123R *Share-Based Payment*. All of the company's stock compensation plans are considered equity plans under SFAS No. 123R, and compensation expense recognized is net of estimated forfeitures over the vesting period. The company issues stock options and stock awards, in the form of restricted performance stock rights and restricted stock rights, under its existing plans. The fair value of stock option awards is estimated on the date of grant using a Black-Scholes option-pricing model and is expensed on a straight-line basis over the vesting period of the options, which is generally three to four years. The fair value of stock awards is determined based on the closing market price of the company's common stock on the grant date and is adjusted at each reporting date based on the amount of shares ultimately expected to vest. Compensation expense for stock awards is expensed over the vesting period, usually three to five years.

**Foreign Currency Translation** For operations outside the U.S. that prepare financial statements in currencies other than the U.S. dollar, results of operations and cash flows are translated at average exchange rates during the period, and assets and liabilities are generally translated at end-of-period exchange rates. Translation adjustments are not material and are included as a separate component of accumulated other comprehensive loss in consolidated shareholders' equity.

**Accumulated Other Comprehensive Loss** The components of accumulated other comprehensive loss are as follows:

\$ in millions	December 31	
	2008	2007
Cumulative translation adjustment	\$ 10	\$ 34
Unrealized (loss) gain on marketable securities and cash flow hedges, net of tax benefit (expense) of \$20 as of December 31, 2008 and \$(2) as of December 31, 2007	(32)	3
Unamortized benefit plan costs, net of tax benefit of \$2,358 as of December 31, 2008 and \$470 at December 31, 2007	(3,620)	(736)
Total accumulated other comprehensive loss	\$ (3,642)	\$ (699)

*Financial Statement Reclassification* Certain amounts in the prior year financial statements and related notes have been reclassified to conform to the current presentation of the Electro-optical Systems (EOS) business, formerly reported in the Electronics segment, as discontinued operations (see Note 6) and the business operation realignments effective in 2008 (see Note 7).

## **2. NEW ACCOUNTING STANDARDS**

### **Adoption of New Accounting Standards**

There have been no significant changes in the company's critical accounting policies during 2008.

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### **NORTHROP GRUMMAN CORPORATION**

The disclosure requirements of SFAS No. 157 *Fair Value Measurements*, which took effect on January 1, 2008, are presented in Note 12. On January 1, 2009, the company will implement the previously deferred provisions of SFAS No. 157 for nonfinancial assets and liabilities recorded at fair value, as required. Management does not believe that the remaining provisions will have a material effect on the company's consolidated financial position or results of operations when they become effective.

#### **Standards Issued But Not Yet Effective**

In December 2007, the FASB issued SFAS No. 141(R) *Business Combinations*. SFAS No. 141(R) expands the definition of a business and establishes the use of the acquisition method for business combinations which requires the measurement and recognition of all assets and liabilities (including goodwill) of an acquired business at fair value on the acquisition date, which is the date that the acquirer obtains control of the business. Among other things, the standard establishes new guidelines for the expensing of transaction and restructuring costs, fair value measurement of contingent consideration in earnings, and capitalization of in-process research and development. The standard also modifies the presentation and recording of deferred taxes and establishes the conditions under which a bargain purchase could result in a gain. SFAS No. 141(R) will be applied prospectively to business combinations with acquisition dates on or after January 1, 2009. Adoption is not expected to materially impact the company's consolidated financial position or results of operations directly when it becomes effective, as the only impact that the standard will have on recorded amounts at that time relates to disposition of uncertain tax positions related to prior acquisitions. Following adoption, the resolution of such items at values that differ from recorded amounts will be adjusted through earnings, rather than through goodwill. Adoption of this statement is, however, expected to have a significant effect on how acquisition transactions subsequent to January 1, 2009, are reflected in the financial statements.

In December 2007, the FASB issued SFAS No. 160 *Noncontrolling Interests in Consolidated Financial Statements an amendment of Accounting Research Bulletin No. 51*. SFAS No. 160 requires presentation of non-controlling interests in consolidated subsidiaries separately within equity in the consolidated statements of financial position as well as the separate presentation within the consolidated statements of operations and comprehensive (loss) income attributable to the parent and non-controlling interest. Accounting for changes in a parent's ownership interest, will generally be at fair value and if the parent retains control or significant influence of the subsidiary, any adjustments will be made through equity, while transactions where control changes will be accounted for through earnings. SFAS No. 160 is effective for the company beginning January 1, 2009. Adoption of this statement is not expected to have a material impact on the company's consolidated financial position or results of operations when it becomes effective, but may significantly affect the accounting for noncontrolling (or minority) interests from that date forward.

Other new pronouncements issued but not effective until after December 31, 2008, are not expected to have a significant effect on the company's consolidated financial position or results of operations.

### **3. GOODWILL IMPAIRMENT CHARGE**

The company performs its annual impairment test for goodwill in accordance with SFAS No. 142 *Goodwill and Other Intangible Assets* as of November 30 each year. The company's testing approach utilizes a discounted cash flow analysis corroborated by comparative market multiples to determine the fair value of its businesses for comparison to their corresponding book values. If the book value exceeds the estimated fair value for a business, a potential impairment is indicated and SFAS No. 142 prescribes the approach for determining the impairment amount, if any. After conducting its 2008 test, the company determined that goodwill at Space Technology was impaired by \$570 million, and goodwill at Shipbuilding was impaired by \$2,490 million, resulting in an aggregate goodwill



impairment charge of \$3,060 million that was recognized in the fourth quarter of 2008. The goodwill impairment charge is primarily driven by adverse equity market conditions and the resulting decrease in current market multiples and the company's stock price as of November 30, 2008. This non-cash charge reduces goodwill recorded in connection with acquisitions made in 2001 and 2002 and does not impact the company's

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overall business operations. The goodwill at these businesses has no tax basis, and accordingly, there is no tax benefit to be derived from recording the impairment charge.

Prior to recording the goodwill impairment charges at Shipbuilding and Space Technology, the company tested the purchased intangible assets and other long-lived assets at both of these businesses as required by SFAS No. 144 *Accounting for the Impairment or Disposal of Long-lived Assets*, and the carrying value of these assets were determined not to be impaired. See Note 11 for additional information relating to the company's purchased intangible assets.

**4. DIVIDENDS ON COMMON STOCK AND CONVERSION OF PREFERRED STOCK**

*Dividends on Common Stock* In April 2008, the company's board of directors approved an increase to the quarterly common stock dividend, from \$.37 per share to \$.40 per share, for shareholders of record as of June 2, 2008.

On February 21, 2007, the company's Board of Directors approved an increase to the quarterly common stock dividend, from \$.30 per share to \$.37 per share, effective with the first quarter 2007 dividends.

On May 17, 2006, the company's Board of Directors approved an increase to the quarterly common stock dividend, from \$.26 per share to \$.30 per share, effective with the second quarter 2006 dividends.

*Conversion of Preferred Stock* On February 20, 2008, the company's board of directors approved the redemption of the 3.5 million shares of mandatorily redeemable convertible preferred stock on April 4, 2008. Prior to the redemption date, substantially all of the preferred shares were converted into common stock at the election of shareholders. All remaining unconverted preferred shares were redeemed by the company on the redemption date. As a result of the conversion and redemption, the company issued approximately 6.4 million shares of common stock.

**5. BUSINESS ACQUISITIONS**

**2008** In October 2008, the company acquired 3001 International, Inc. (3001) for approximately \$92 million in cash. 3001 provides geospatial data production and analysis, including airborne imaging, surveying, mapping and geographic information systems for U.S. and international government intelligence, defense and civilian customers. The operating results of 3001 are reported in the Information Technology segment from the date of acquisition. The assets, liabilities, and results of operations of 3001 are not material to the company's consolidated financial position or results of operations, and thus pro-forma information is not presented. The consolidated financial statements reflect preliminary estimates of the fair value of the assets acquired and liabilities assumed and the related allocation of the purchase price for the entities acquired. Management does not expect adjustments to these estimates, if any, to have a material effect on the company's consolidated financial position or results of operations.

**2007** During the third quarter of 2007, the company acquired Xinetics Inc., reported in the Space Technology segment, and the remaining 61 percent of Scaled Composites, LLC, reported in the Integrated Systems segment, for an aggregate amount of approximately \$100 million in cash. The assets, liabilities, and results of operations of these entities were not material to the company's consolidated financial position or results of operations, and thus pro-forma information is not presented.

In July 2007, the company and Science Applications International Corporation (SAIC) reorganized the AMSEC, LLC joint venture (AMSEC), by dividing AMSEC along customer and product lines. AMSEC is a full-service supplier that

provides engineering, logistics and technical support services primarily to Navy ship and aviation programs. Under the reorganization plan, the company retained the ship engineering, logistics and technical service businesses under the AMSEC name (the AMSEC Businesses) and, in exchange, SAIC received the aviation, combat systems and strike force integration services businesses from AMSEC (the Divested Businesses). This reorganization was treated as a step acquisition for the acquisition of SAIC's interests in the AMSEC Businesses, with the company recognizing a pre-tax gain of \$23 million for the effective sale of its interests in the

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Divested Businesses. From the date of this reorganization, the operating results of the AMSEC Businesses, and transaction gain, have been reported on a consolidated basis in the Shipbuilding segment from the date of this reorganization. Prior to the reorganization, the company accounted for AMSEC, LLC under the equity method. The assets, liabilities, and results of operations of the AMSEC Businesses were not material to the company's consolidated financial position or results of operations, and thus pro-forma information is not presented.

In January 2007, the company acquired Essex Corporation (Essex) for approximately \$590 million in cash, including the assumption of debt totaling \$23 million. Essex provides signal processing services and products, and advanced optoelectronic imaging for U.S. government intelligence and defense customers. The operating results of Essex are reported in the Mission Systems segment. The assets, liabilities, and results of operations of Essex were not material to the company's consolidated financial position or results of operations, and thus pro-forma information is not presented.

2006 There were no significant acquisitions during 2006.

**6. BUSINESS DISPOSITIONS**

2008 In April 2008, the company sold its Electro-Optical Systems (EOS) business for \$175 million in cash to L-3 Communications Corporation and recognized a gain of \$19 million, net of taxes of \$39 million. EOS, formerly a part of the Electronics segment, produces night vision and applied optics products. Sales for this business in the years ended December 31, 2008, 2007, and 2006, were approximately \$53 million, \$190 million, and \$122 million, respectively. Operating results of this business are reported as discontinued operations in the consolidated statements of operations and comprehensive (loss) income for all periods presented.

2007 During the second quarter of 2007, management announced its decision to exit the remaining Interconnect Technologies (ITD) business reported within the Electronics segment. Sales for this business in the years ended December 31, 2007 and 2006, were \$14 million and \$35 million, respectively. The shut-down was completed during the third quarter of 2007 and costs associated with the shut-down were not material. The results of this business are reported as discontinued operations in the consolidated statements of operations and comprehensive (loss) income for all periods presented.

2006 During the second quarter of 2006, the Enterprise Information Technology (EIT) business, formerly reported in the Information Technology segment, was shut down and costs associated with the exit activities were not material. The results of operations of this business are reported as discontinued operations in the consolidated statements of operations and comprehensive (loss) income for all periods presented.

The company sold the assembly business unit of ITD during the first quarter of 2006 and Winchester Electronics (Winchester) during the second quarter of 2006 for net cash proceeds of \$26 million and \$17 million, respectively, and recognized after-tax gains of \$4 million and \$2 million, respectively, in discontinued operations. Each of these business units was associated with the Electronics Segment. The results of operations of the assembly business unit of ITD are reported as discontinued operations in the consolidated statements of operations and comprehensive (loss) income. The results of operations of Winchester were not material to any of the periods presented and have therefore not been reclassified as discontinued operations.

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*Discontinued Operations* Sales and operating results of the businesses classified within discontinued operations were as follows:

\$ in millions	Year Ended December 31		
	2008	2007	2006
Sales and service revenues	\$ 53	\$ 204	\$ 313
Loss from discontinued operations	(6)	(32)	(69)
Income tax (expense) benefit	(1)	11	24
Loss from discontinued operations, net of tax	(7)	(21)	(45)
Gain from divestitures	66		11
Income tax expense	(40)		(17)
Gain (loss) from discontinued operations, net of tax	\$ 19	\$ (21)	\$ (51)

Tax rates on discontinued operations vary from the company's effective tax rate due to the non-deductibility of goodwill for tax purposes.

**7. SEGMENT INFORMATION**

At December 31, 2008, the company was aligned into seven reporting segments categorized into four primary businesses. The Mission Systems, Information Technology, and Technical Services segments are presented as Information & Services. The Integrated Systems and Space Technology segments are presented as Aerospace. The Electronics and Shipbuilding segments are each presented as separate businesses.

*U.S. Government Sales* Revenue from the U.S. Government (which includes Foreign Military Sales) includes revenue from contracts for which Northrop Grumman is the prime contractor as well as those for which the company is a subcontractor and the ultimate customer is the U.S. Government. All of the company's segments derive substantial revenue from the U.S. Government. Sales to the U.S. Government amounted to approximately \$30.9 billion, \$28.8 billion, and \$27.2 billion, or 91.2 percent, 90.6 percent, and 90.8 percent of total revenue for the years ended December 31, 2008, 2007, and 2006, respectively.

*Foreign Sales* Direct foreign sales amounted to approximately \$1.7 billion, \$1.7 billion, and \$1.6 billion, or 5.1 percent, 5.5 percent, and 5.2 percent of total revenue for the years ended December 31, 2008, 2007, and 2006, respectively.

*Discontinued Operations* The company's discontinued operations are excluded from all of the data elements in the following tables, except for assets by segment.

*Assets* Substantially all of the company's assets are located or maintained in the US.

*Realignments* The company, from time to time, acquires or disposes of businesses, and realigns contracts, programs or business areas among and within its operating segments that possess similar customers, expertise, and capabilities.

Internal realignments are designed to more fully leverage existing capabilities and enhance development and delivery of products and services. During the second quarter of 2008, the company transferred certain programs and assets from the missiles business in the Mission Systems segment to the Space Technology segment. In January 2008, the Newport News and Ship Systems businesses were combined into a single operating segment called Northrop Grumman Shipbuilding. Previously, these businesses were separate operating segments which were aggregated into a single reporting segment for financial reporting purposes. In addition, certain Electronics businesses were transferred to Mission Systems during the first quarter of 2008. The operating results for all periods presented have been revised to reflect these changes. See a description of the segment business areas and specific realignments located in Part I, Item 1.

*Subsequent Realignments* In January 2009, the company streamlined its organizational structure by reducing the number of reporting segments from seven to five. The five segments are Aerospace Systems, which combines the

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former Integrated Systems and Space Technology segments; Electronic Systems; Information Systems, which combines the former Information Technology and Mission Systems segments; Shipbuilding and Technical Services. The creation of the Aerospace Systems and Information Systems segments strengthens alignment with customers, improves the company's ability to execute on programs and win new business, and enhances cost competitiveness. This subsequent realignment is not reflected in any of the accompanying financial information.

**Results of Operations By Segment**

<i>\$ in millions</i>	Year Ended December 31		
	2008	2007	2006
<b>Sales and Service Revenues</b>			
<b>Information &amp; Services</b>			
Mission Systems	\$ 5,640	\$ 5,077	\$ 4,704
Information Technology	4,518	4,486	3,962
Technical Services	2,296	2,177	1,858
<b>Aerospace</b>			
Integrated Systems	5,504	5,067	5,500
Space Technology	4,336	4,176	3,869
<b>Electronics</b>	7,090	6,528	6,267
<b>Shipbuilding</b>	6,145	5,788	5,321
Intersegment eliminations	(1,642)	(1,471)	(1,490)
Total sales and service revenues	\$ 33,887	\$ 31,828	\$ 29,991

<i>\$ in millions</i>	Year Ended December 31		
	2008	2007	2006
<b>Operating (Loss) Income</b>			
<b>Information &amp; Services</b>			
Mission Systems	\$ 508	\$ 508	\$ 451
Information Technology	305	329	342
Technical Services	121	120	120
<b>Aerospace</b>			
Integrated Systems	613	591	551
Space Technology	(196)	329	311
<b>Electronics</b>	952	813	786
<b>Shipbuilding</b>	(2,307)	538	393
Intersegment eliminations	(141)	(113)	(117)
<b>Total segment operating (loss) income</b>	(145)	3,115	2,837
Non-segment factors affecting operating (loss) income			
Unallocated expenses	(159)	(206)	(287)
Net pension adjustment	263	127	(37)
Royalty income adjustment	(70)	(18)	(19)

Total operating (loss) income	\$ (111)	\$ 3,018	\$ 2,494
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*Goodwill Impairment Charge* The operating losses for the year ended December 31, 2008 at Space Technology and Shipbuilding reflect goodwill impairment charges of \$570 million and \$2,490 million, respectively. See Note 3.

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*Shipbuilding Earnings Charge Relating to LHD-8 Contract Performance* LHD-8 is an amphibious assault ship under construction at one of the Gulf Coast shipyards. The LHD-8 contract features significant enhancements compared with earlier ships of the class and will incorporate major new systems, including a gas turbine engine propulsion system, a new electrical generation and distribution system, and a centralized machinery control system administered over a fiber optic network. The LHD-8 contract is a fixed-price incentive contract, and a substantial portion of the performance margin on the contract was previously consumed by the impact from Hurricane Katrina in 2005 and a charge of \$55 million in the second quarter of 2007. Lack of progress in LHD-8 on-board testing preparatory to sea trials prompted the company to undertake a comprehensive review of the program, including a detailed physical audit of the ship. From this review, management became aware in March 2008 of the need for substantial re-work on the ship, primarily in electrical cable installations. As a result, during the first quarter of 2008, the company recorded a pre-tax charge of \$272 million for cost growth on the LHD-8 contract and an additional \$54 million, primarily for schedule impacts on other ships and impairment of purchased intangibles at the Gulf Coast shipyards. The LHD-8 program achieved several important risk retirement milestones toward its planned delivery date, and as a result \$63 million of the first quarter 2008 charge was reversed.

*Unallocated Expenses* Unallocated expenses include the portion of corporate expenses not considered allowable or allocable under applicable U.S. Government Cost Accounting Standards (CAS) regulations and the Federal Acquisition Regulation, and therefore not allocated to the segments, for costs related to management and administration, legal, environmental, certain compensation and retiree benefits, and other expenses.

*Net Pension Adjustment* The net pension adjustment reflects the difference between pension expense determined in accordance with U.S. GAAP and pension expense allocated to the operating segments determined in accordance with CAS.

*Royalty Income Adjustment* Royalty income is included in segment operating income and reclassified to other income for financial reporting purposes. The royalty income adjustment for the year ended December 31, 2008 includes \$59 million related to patent infringement settlements at Electronics.

**Other Financial Information**

\$ in millions	December 31	
	2008	2007
<b>Assets</b>		
<b>Information &amp; Services</b>		
Mission Systems	\$ 5,409	\$ 5,965
Information Technology	3,685	3,576
Technical Services	1,143	1,133
<b>Aerospace</b>		
Integrated Systems	2,386	2,217
Space Technology	3,813	4,016
<b>Electronics</b>	5,040	5,183
<b>Shipbuilding</b>	4,427	6,874
Segment assets	25,903	28,964
Corporate	4,294	4,409

Total assets	<b>\$ 30,197</b>	\$ 33,373
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	Year Ended December 31		
<i>\$ in millions</i>	<b>2008</b>	2007	2006
<b>Capital Expenditures</b>			
<b>Information &amp; Services</b>			
Mission Systems	\$ 46	\$ 43	\$ 50
Information Technology	16	42	32
Technical Services	3	9	4
<b>Aerospace</b>			
Integrated Systems	136	100	119
Space Technology	88	109	106
<b>Electronics</b>	149	120	121
<b>Shipbuilding</b>	218	247	287
<b>Corporate</b>	25	12	13
Total capital expenditures	\$ 681	\$ 682	\$ 732
<b>Depreciation and Amortization</b>			
<b>Information &amp; Services</b>			
Mission Systems	\$ 61	\$ 56	\$ 39
Information Technology	97	64	46
Technical Services	7	7	7
<b>Aerospace</b>			
Integrated Systems	107	108	110
Space Technology	131	131	130
<b>Electronics</b>	150	176	206
<b>Shipbuilding</b>	193	170	153
<b>Corporate</b>	15	15	12
Total depreciation and amortization	\$ 761	\$ 727	\$ 703

The depreciation and amortization expense above includes amortization of purchased intangible assets as well as amortization of deferred and other outsourcing costs.

**8. (LOSS) EARNINGS PER SHARE**

*Basic (Loss) Earnings Per Share* Basic (loss) earnings per share from continuing operations are calculated by dividing (loss) earnings from continuing operations available to common shareholders by the weighted-average number of shares of common stock outstanding during each period.

*Diluted (Loss) Earnings Per Share* For the year ended December 31, 2008, the potential dilutive effect of 7.1 million shares from stock options, stock awards, and the mandatorily redeemable preferred stock were excluded from the computation of weighted average diluted common shares outstanding as the shares would have had an anti-dilutive effect. Diluted earnings per share for the years ended December 31, 2007 and 2006, include the dilutive effect of stock options and other stock awards granted to employees under stock-based compensation plans, and 6.4 million dilutive

shares from the company's mandatorily redeemable convertible preferred stock (see Note 4). The dilutive effect of these potential common stock instruments totaled 12.6 million and 12.9 million shares for the years ended December 31, 2007, and 2006, respectively. The weighted-average diluted shares outstanding for the years ended December 31, 2008, 2007 and 2006, exclude stock options to purchase approximately 2.1 million, 59 thousand and 8 thousand shares, respectively, because such options have an exercise price in excess of the average market price of the company's common stock during the year.

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Diluted (loss) earnings per share from continuing operations are calculated as follows:

<i>in millions, except per share</i>	<b>2008</b>	December 31, 2007	2006
<b>Diluted (Loss) Earnings Per Share From Continuing Operations</b>			
(Loss) income from continuing operations	<b>\$ (1,281)</b>	\$ 1,811	\$ 1,593
Add dividends on mandatorily redeemable convertible preferred stock		24	24
(Loss) income from continuing operations available to common shareholders	<b>\$ (1,281)</b>	\$ 1,835	\$ 1,617
Weighted-average common shares outstanding	<b>334.5</b>	341.7	345.7
Dilutive effect of stock options, awards, and mandatorily redeemable convertible preferred stock		12.6	12.9
Weighted-average diluted common shares outstanding	<b>334.5</b>	354.3	358.6
<b>Diluted (loss) earnings per share from continuing operations</b>	<b>\$ (3.83)</b>	\$ 5.18	\$ 4.51

*Share Repurchases* The table below summarizes the company's share repurchases beginning January 1, 2006:

	Amount	Average	Total		Shares Repurchased		
	Authorized	Price	Retired		(In millions)		
Authorization Date	(In millions)	Per Share	(In millions)	Date Completed	<b>2008</b>	2007	2006
October 24, 2005	\$ 1,500	\$ 65.08	23.0	February 2007		2.3	11.6
December 14, 2006	1,000	75.96	13.1	November 2007		13.1	
December 19, 2007	2,500	72.55	21.4		<b>21.4</b>		
					<b>21.4</b>	15.4	11.6

Share repurchases take place at management's discretion or under pre-established non-discretionary programs from time to time, depending on market conditions, in the open market, and in privately negotiated transactions. The company retires its common stock upon repurchase and has not made any purchases of common stock other than in connection with these publicly announced repurchase programs.

Under certain of its share repurchase authorizations, the company has entered into accelerated share repurchase agreements with banks to repurchase shares of common stock. Under these agreements, shares were immediately borrowed by the bank and then sold to and canceled by the company. Subsequently, shares were purchased in the open market by the bank to settle its share borrowings. The ultimate cost of the company's share repurchases under these

agreements was subject to adjustment based on the actual cost of the shares subsequently purchased by the bank. If an additional amount was owed by the company upon settlement, the price adjustment could have been settled, at the company's option, in cash or in shares of common stock. The final price adjustments under these agreements have been immaterial. No accelerated share repurchase agreements were utilized in connection with the 2008 repurchases shown above.

As of December 31, 2008, the company has authorized \$945 million for share repurchases.

## **9. ACCOUNTS RECEIVABLE, NET**

Unbilled amounts represent sales for which billings have not been presented to customers at year-end. These amounts are usually billed and collected within one year. Progress payments are received on a number of firm fixed-price contracts. Unbilled amounts are presented net of progress payments of \$4.7 billion and \$3.9 billion at December 31, 2008 and 2007, respectively.

Accounts receivable at December 31, 2008, are expected to be collected in 2009, except for approximately \$225 million due in 2010 and \$53 million due in 2011 and later.

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Allowances for doubtful amounts mainly represent estimates of overhead costs which may not be successfully negotiated and collected.

Accounts receivable were composed of the following:

<i>\$ in millions</i>	December 31,	
	2008	2007
<b>Due From U.S. Government</b>		
Amounts billed	<b>\$ 1,260</b>	\$ 1,414
Recoverable costs and accrued profit on progress completed unbilled	<b>1,868</b>	1,603
	<b>3,128</b>	3,017
<b>Due From Other Customers</b>		
Amounts billed	<b>419</b>	442
Recoverable costs and accrued profit on progress completed unbilled	<b>658</b>	617
	<b>1,077</b>	1,059
Total accounts receivable	<b>4,205</b>	4,076
Allowances for doubtful amounts	<b>(301)</b>	(286)
Total accounts receivable, net	<b>\$ 3,904</b>	\$ 3,790

**10. INVENTORIED COSTS, NET**

Inventoried costs were composed of the following:

<i>\$ in millions</i>	December 31,	
	2008	2007
Production costs of contracts in process	<b>\$ 2,393</b>	\$ 1,909
General and administrative expenses	<b>221</b>	172
	<b>2,614</b>	2,081
Progress payments received	<b>(1,864)</b>	(1,345)
	<b>750</b>	736
Product inventory	<b>253</b>	264
Total inventoried costs, net	<b>\$ 1,003</b>	\$ 1,000

**11. GOODWILL AND OTHER PURCHASED INTANGIBLE ASSETS**

### **Goodwill**

Goodwill and other purchased intangible assets are included in the identifiable assets of the segment to which they have been assigned. Impairment tests are performed at least annually and more often as circumstances require. Any goodwill impairment, as well as the amortization of other purchased intangible assets, is charged against the respective segment's operating income. The annual impairment test for all segments was performed as of November 30, 2008. In performing the goodwill impairment tests, the company uses a discounted cash flow approach corroborated by comparative market multiples, where appropriate, to determine the fair value of its businesses. After conducting its 2008 test, the company determined that goodwill at Space Technology was impaired by \$570 million, and goodwill at Shipbuilding was impaired by \$2,490 million, resulting in an aggregate goodwill impairment charge of \$3,060 million that was recognized in the fourth quarter of 2008. The goodwill impairment charge is primarily driven by adverse equity market conditions and the resulting decrease in current market multiples and the company's stock price as of November 30, 2008 (See Note 3).

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The changes in the carrying amounts of goodwill during 2007 and 2008, are as follows:

<i>\$ in millions</i>	<b>Mission Systems</b>	<b>Information Technology</b>	<b>Technical Services</b>	<b>Integrated Systems</b>	<b>Space Technology</b>	<b>Electronics</b>	<b>Shipbuilding</b>	<b>Total</b>
Balance as of January 1, 2007	\$ 3,883	\$ 2,219	\$ 787	\$ 976	\$ 3,254	\$ 2,516	\$ 3,584	\$ 17,219
Goodwill transferred due to segment realignment	346		34		(380)			
Goodwill acquired	522			47	37		57	663
Adjustment to initially apply FIN 48	(22)	(7)	(3)		(18)	(1)	(12)	(63)
Fair value adjustments to net assets acquired	(52)	(28)	(8)	(2)	(41)	(1)	(15)	(147)
Balance as of December 31, 2007	4,677	2,184	810	1,021	2,852	2,514	3,614	17,672
Goodwill transferred due to segment realignment	(458)				505	(47)		
Goodwill Adjustment Related to Business Sold						(47)		(47)
Goodwill acquired		78						78
Fair value adjustments to net assets acquired	(63)	(19)	(8)	(6)	(54)	8	17	(125)
Goodwill Impairment					(570)		(2,490)	(3,060)
<b>Balance as of December 31, 2008</b>	<b>\$ 4,156</b>	<b>\$ 2,243</b>	<b>\$ 802</b>	<b>\$ 1,015</b>	<b>\$ 2,733</b>	<b>\$ 2,428</b>	<b>\$ 1,141</b>	<b>\$ 14,518</b>

*Segment Realignment* During the second quarter of 2008, the company transferred certain programs and assets, including goodwill of \$505 million, from the missiles business in the Mission Systems segment to the Space Technology segment.

In January 2008, the Newport News and Ship Systems businesses were combined into a single operating segment called Northrop Grumman Shipbuilding. In addition, certain Electronics businesses were transferred to Mission Systems during the first quarter of 2008, along with goodwill of \$47 million.

*Fair Value Adjustments to Net Assets Acquired* For 2008, the fair value adjustments were primarily due to the final settlement of the Internal Revenue Service (IRS) examination of the 1999-2002 TRW income tax returns (see Note 13) and purchase price allocation related to the 3001 acquisition (see Note 5).

**Purchased Intangible Assets**

The table below summarizes the company's aggregate purchased intangible assets as follows:

	December 31, 2008			December 31, 2007		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
<i>\$ in millions</i>						
Contract and program intangibles	\$ 2,642	\$ (1,720)	\$ 922	\$ 2,661	\$ (1,616)	\$ 1,045
Other purchased intangibles	100	(75)	25	100	(71)	29
Total	\$ 2,742	\$ (1,795)	\$ 947	\$ 2,761	\$ (1,687)	\$ 1,074

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The company's purchased intangible assets are subject to amortization and are being amortized on a straight-line basis over an aggregate weighted-average period of 21 years. Aggregate amortization expense for 2008, 2007, and 2006, was \$136 million, \$132 million, and \$134 million, respectively. The 2008 amount includes \$19 million of additional amortization recorded in the first quarter of 2008 associated with the LHD-8 and other Gulf Coast Shipbuilding programs (see Note 7).

The table below shows expected amortization for purchased intangibles as of December 31, 2008, for each of the next five years:

*\$ in millions*

Year ending December 31

2009	\$ 102
2010	91
2011	54
2012	53
2013	43

**12. FAIR VALUE OF FINANCIAL INSTRUMENTS**

The company adopted the disclosure requirements of SFAS No. 157 *Fair Value Measurements* (SFAS No. 157) effective January 1, 2008. SFAS No. 157 clarifies the definition of fair value, prescribes methods for measuring fair value, establishes a fair value hierarchy based on the inputs used to measure fair value and expands disclosures about the use of fair value measurements.

The valuation techniques required by SFAS No. 157 are based upon observable and unobservable inputs. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect internal market assumptions. These two types of inputs create the following fair value hierarchy:

Level 1 Quoted prices for identical instruments in active markets.

Level 2 Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations whose inputs are observable or whose significant value drivers are observable.

Level 3 Significant inputs to the valuation model are unobservable.

The following section describes the valuation methodologies used by the company to measure its financial instruments at fair value.

*Investments in Marketable Securities* The company holds a portfolio of marketable securities, primarily consisting of equity and debt securities that are classified as either trading or available-for-sale. When available, quoted market prices are used to determine the fair value of marketable securities. Quotes from independent pricing vendors based on recent trading activity and other relevant information are used when quoted market prices are unavailable. As of December 31, 2008, there were marketable equity securities of \$44 million included in prepaid expenses and other

current assets and \$180 million of marketable equity securities included in other long-term assets, all of which were considered Level 1. The total fair value of investments in marketable securities as of December 31, 2007, was \$258 million.

*Derivative financial instruments and hedging activities* In order to manage its exposure to interest rate risk and foreign currency exchange rate risk, the company utilized the following derivative financial instruments, all of which were considered Level 2 instruments.

The company enters into foreign currency forward contracts to manage foreign currency exchange risk related to receipts from customers and payments to suppliers denominated in foreign currencies. Gains and losses from such transactions are included as contract costs. At December 31, 2008 and 2007, the total fair value of foreign

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currency forward contracts outstanding was a net asset of \$25 million and \$4 million, respectively. In October 2008, the company designated a portion of its forward contracts as cash flow hedges of the forecasted revenue and related expenses associated with a long term contract. Each reporting period these cash flow hedges, which extend to 2013, are tested for effectiveness using regression testing. For 2008, the change in the fair value of the foreign currency forward contracts and gains and losses associated with hedge ineffectiveness recognized in the consolidated statements of results was immaterial.

The company enters into interest rate swap agreements to benefit from floating interest rates as an offset to the fixed-rate characteristic of certain of its long-term debt instruments. At December 31, 2008, two interest rate swap agreements were in effect and accounted for as fair value hedges designed to convert fixed rates to floating rates. These interest rate swaps each hedge a \$200 million notional amount of U.S. dollar fixed-rate debt, and mature on October 15, 2009, and February 15, 2011, respectively. Any changes in the fair value of the swaps are offset by an equal and opposite change in the fair value of the hedged item; therefore, there is no net impact to the company's reported consolidated results of operations. At December 31, 2008 and 2007, the aggregate net fair value of the swaps was not material. The company may also enter into interest rate swap agreements to offset the variable-rate characteristics of certain variable-rate term loans which may be outstanding from time to time under the company's credit facility (see Note 14).

In October 2008, the company entered into two forward-starting interest rate swaps with a notional value totaling \$400 million. The company designated these swaps as cash flow hedges of future interest payments on \$400 million of financing expected to occur in 2009. There was no hedge ineffectiveness as of December 31, 2008, on these cash flow hedges. The change in the fair value of these swaps from inception generated a pre-tax liability of \$58 million at December 31, 2008.

The carrying amounts of other financial instruments not listed in the table below approximate fair value due to the short-term nature of these items.

Carrying amounts and the related estimated fair values of the company's financial instruments not measured at fair value on a recurring basis at December 31 are as follows:

<i>\$ in millions</i>	2008		2007	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Cash surrender value of life insurance policies	240	240	\$ 315	\$ 315
Long-term debt	(3,920)	(4,369)	(4,029)	(4,488)
Mandatorily redeemable preferred stock			(350)	(510)

*Cash Surrender Value of Life Insurance Policies* The company maintains whole life insurance policies on a group of executives for use as a funding source for deferred compensation arrangements. These policies are recorded at their cash surrender value as determined by the insurance carrier. Additionally, the company has split-dollar life insurance policies on former officers and executives from acquired businesses which are recorded at the lesser of their cash surrender value or premiums paid. The policies are utilized as a partial funding source for supplemental employee retirement plans and amounts associated with these policies are recorded in miscellaneous other assets in the consolidated statements of financial position.

*Long-Term Debt* The fair value of the long-term debt was calculated based on interest rates available for debt with terms and due dates similar to the company's existing debt arrangements.

*Mandatorily Redeemable Preferred Stock* The fair value of the mandatorily redeemable preferred stock was calculated based on the closing market price quoted on the New York Stock Exchange each year end. As discussed in Note 4, all preferred stock was converted or redeemed as of April 4, 2008.

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The company's effective tax rate on earnings from continuing operations for the year ended December 31, 2008, was 33.9 percent (excluding the non-cash, non-deductible goodwill impairment charge of \$3.1 billion at Shipbuilding and Space Technology) as compared with 32.9 percent and 31.2 percent in 2007 and 2006, respectively. The company's effective tax rates reflect tax credits, manufacturing deductions and the reversal of previously established expense provisions as a result of favorable settlements with the IRS. During 2007, the company reached a partial settlement agreement with the IRS regarding its audit of the company's tax years ended December 31, 2001 through 2003 and recognized \$22 million of benefit upon settlement. During 2006, the company reached final approval with the IRS regarding its audit of the company's B-2 program for the years ended December 31, 1997 through 2000 and recognized \$48 million of benefit upon settlement.

Income tax expense, both federal and foreign, consisted of the following:

<i>\$ in millions</i>	Year Ended December 31		
	<b>2008</b>	2007	2006
<b>Income Taxes on Continuing Operations</b>			
Currently Payable			
Federal income taxes	<b>\$ 770</b>	\$ 675	\$ 538
Foreign income taxes	<b>35</b>	42	27
Total federal and foreign income taxes currently payable	<b>805</b>	717	565
Change in deferred federal and foreign income taxes	<b>108</b>	170	158
Total federal and foreign income taxes	<b>\$ 913</b>	\$ 887	\$ 723

The geographic source of earnings from continuing operations before income taxes is as follows:

<i>\$ in millions</i>	Year Ended December 31		
	<b>2008</b>	2007	2006
Domestic (loss) income	<b>\$ (470)</b>	\$ 2,607	\$ 2,244
Foreign income	<b>102</b>	91	72
(Loss) income from continuing operations before income taxes	<b>\$ (368)</b>	\$ 2,698	\$ 2,316

Income tax expense differs from the amount computed by multiplying the statutory federal income tax rate times the (loss) income from continuing operations before income taxes due to the following:

<i>\$ in millions</i>	Year Ended December 31		
	<b>2008</b>	2007	2006
Income tax (benefit) expense on continuing operations at statutory rate	<b>\$ (129)</b>	\$ 944	\$ 811

Goodwill impairment	<b>1,071</b>		
Manufacturing deduction	<b>(19)</b>	(19)	(9)
Research tax credit	<b>(13)</b>	(14)	(3)
Extraterritorial income exclusion/foreign sales corporation			(6)
Wage credit			(18)
Settlement of IRS appeals cases	<b>(35)</b>	(22)	(55)
Other, net	<b>38</b>	(2)	3
Total federal and foreign income taxes	<b>\$ 913</b>	\$ 887	\$ 723

*Uncertain Tax Positions* The company adopted the provisions of FIN 48 in 2007. As a result of the implementation of FIN 48, the company made a comprehensive review of its portfolio of uncertain tax positions



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in accordance with recognition standards established by the interpretation. As a result of this review, the company adjusted the estimated value of its uncertain tax positions on January 1, 2007, by recognizing additional liabilities totaling \$66 million through a charge to retained earnings and reducing the carrying value of uncertain tax positions resulting from prior acquisitions by \$63 million through a reduction to goodwill.

During the third quarter of 2008, the company reached a settlement with the IRS and the Congressional Joint Committee on Taxation (Joint Committee) with respect to IRS audit of the TRW tax returns for the years 1999-2002. As a result of this settlement, the company reduced its liability for uncertain tax positions by \$126 million (including accrued interest of \$44 million), \$95 million of which was recorded as a reduction of goodwill.

As of December 31, 2008, the estimated value of the company's uncertain tax positions was a liability of \$461 million, which includes accrued interest of \$47 million. If the company's positions are sustained by the taxing authority in favor of the company, the reversal of the entire balance would reduce the company's effective tax rate.

The change in unrecognized tax benefits during 2008, excluding interest, is as follows:

<i>\$ in millions</i>	December 31,	
	<b>2008</b>	2007
Unrecognized tax benefit at beginning of the year	<b>\$ 488</b>	\$ 459
Additions based on tax positions related to the current year	<b>5</b>	18
Additions for tax positions of prior years	<b>15</b>	85
Reductions for tax positions of prior years		(57)
Statute expiration	<b>(9)</b>	
Settlements	<b>(83)</b>	(17)
Net change in unrecognized tax benefits	<b>(72)</b>	29
Unrecognized tax benefit at end of the year	<b>\$ 416</b>	\$ 488

In 2008, the company reached a tentative partial settlement agreement with IRS Appeals on substantially all of the remaining issues from the IRS examination of the company's tax returns for the years ended 2001-2003. This agreement is subject to review by the Joint Committee. Although the final outcome is not determinable until the Joint Committee completes its review during 2009, it is reasonably possible that a reduction to unrecognized tax benefits of up to \$59 million may occur.

The company's federal tax returns for the years 2004 through 2006 are currently under examination by the IRS. In addition, open tax years related to state and foreign jurisdictions remain subject to examination but are not considered material.

Although the company believes it has adequately provided for all tax positions, amounts asserted by taxing authorities could be greater than the company's accrued position. Accordingly, additional provisions on federal, foreign and state tax related matters could be recorded in the future as revised estimates are made or the underlying matters are effectively settled or otherwise resolved.

During the years ended December 31, 2008 and 2007, the company recorded approximately \$29 million and \$14 million for tax-related interest and penalties within income tax expense, respectively.

*Deferred Income Taxes* Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and tax purposes. Such amounts are classified in the consolidated statements of financial position as current or noncurrent assets or liabilities based upon the classification of the related assets and liabilities.

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The tax effects of significant temporary differences and carryforwards that gave rise to year-end deferred federal, state and foreign tax balances, as presented in the consolidated statements of financial position, are as follows:

<i>\$ in millions</i>	December 31,	
	2008	2007
<b>Deferred Tax Assets</b>		
Retirement benefit plan expense	\$ 2,562	\$ 610
Provision for accrued liabilities	740	796
Tax credits and capital loss carryforwards	33	592
Other	378	462
Gross deferred tax assets	3,713	2,460
Less valuation allowance	(33)	(592)
Net deferred tax assets	3,680	1,868
<b>Deferred Tax Liabilities</b>		
Provision for accrued liabilities		61
Contract accounting differences	357	284
Purchased intangibles	222	327
Depreciation and amortization	472	418
Goodwill amortization	570	505
Gross deferred tax liabilities	1,621	1,595
Total net deferred tax assets	\$ 2,059	\$ 273

Net deferred tax assets (liabilities) as presented in the consolidated statements of financial position are as follows:

<i>\$ in millions</i>	December 31,	
	2008	2007
Net current deferred tax assets	\$ 549	\$ 542
Net non-current deferred tax assets	1,510	65
Net current deferred tax liabilities		(4)
Net non-current deferred tax liabilities		(330)
Total net deferred tax assets	\$ 2,059	\$ 273

**Foreign Income** As of December 31, 2008, the company had approximately \$474 million of accumulated undistributed earnings generated by its foreign subsidiaries. No deferred tax liability has been recorded on these earnings since the company intends to permanently reinvest these earnings, thereby indefinitely postponing their remittance. Should these earnings be distributed in the form of dividends or otherwise, the distributions would be

subject to U.S. federal income tax at the statutory rate of 35 percent, less foreign tax credits available to offset such distributions, if any. In addition, such distributions would be subject to withholding taxes in the various tax jurisdictions.

*Tax Carryforwards* At December 31, 2008, the company had approximately \$33 million of capital loss carryforwards that were fully offset by valuation allowance. As noted above, approximately \$346 million of the capital loss carryforward was reduced in the tentative settlement agreement with the IRS for its audit of the tax years 2001-2003. The majority of the remaining capital loss carryforward, approximately \$210 million, expired unutilized.

Table of Contents**NORTHROP GRUMMAN CORPORATION****14. NOTES PAYABLE TO BANKS AND LONG-TERM DEBT**

*Lines of Credit* The company has available uncommitted short-term credit lines in the form of money market facilities with several banks. The amount and conditions for borrowing under these credit lines depend on the availability and terms prevailing in the marketplace. No fees or compensating balances are required for these credit facilities.

*Credit Facility* The company has a revolving credit facility in an aggregate principal amount of \$2 billion that matures on August 10, 2012. The credit facility permits the company to request additional lending commitments of up to \$500 million from the lenders under the agreement or other eligible lenders under certain circumstances. The agreement provides for swingline loans and letters of credit as sub-facilities for the credit facilities provided for in the agreement. Borrowings under the credit facility bear interest at various rates, including the London Interbank Offered Rate, adjusted based on the company's credit rating, or an alternate base rate plus an incremental margin. The credit facility also requires a facility fee based on the daily aggregate amount of commitments (whether or not utilized) and the company's credit rating level, and contains certain financial covenants relating to a maximum debt to capitalization ratio, and certain restrictions on additional asset liens. There was a maximum of \$300 million and \$350 million borrowed under this facility during 2008 and 2007, respectively, and there was no balance outstanding under this facility at December 31, 2008, and 2007. As of December 31, 2008, the company was in compliance with all covenants.

*Gulf Opportunity Zone Industrial Development Revenue Bonds* As of December 31, 2008, Shipbuilding had \$200 million outstanding from the issuance of Gulf Opportunity Zone Industrial Development Revenue Bonds issued by the Mississippi Business Finance Corporation. These bonds accrue interest at a fixed rate of 4.55 percent per annum (payable semi-annually), and repayment of principal and interest is guaranteed by the company. In accordance with the terms of the bonds, the proceeds have been used to finance the construction, reconstruction, and renovation of the company's interest in certain ship manufacturing and repair facilities, or portions thereof, located in the state of Mississippi. As of December 31, 2008, the company had utilized approximately \$200 million of the bond proceeds, and no amount was recorded in miscellaneous other assets as restricted cash in the consolidated statements of financial position. As of December 31, 2007, the company had utilized approximately \$140 million of the bond proceeds, and \$60 million was recorded in miscellaneous other assets as restricted cash in the consolidated statements of financial position.

Long-term debt consisted of the following:

<i>\$ in millions</i>	December 31,	
	2008	2007
Notes and debentures due 2009 to 2036, rates from 6.25% to 9.375%	<b>\$ 3,600</b>	\$ 3,705
Other indebtedness due 2009 to 2028, rates from 4.55% to 8.5%	<b>320</b>	324
Total long-term debt	<b>3,920</b>	4,029
Less current portion	<b>477</b>	111
Long-term debt, net of current portion	<b>\$ 3,443</b>	\$ 3,918

Indentures underlying long-term debt issued by the company or its subsidiaries contain various restrictions with respect to the issuer, including one or more restrictions relating to limitations on liens, sale-leaseback arrangements, and funded debt of subsidiaries.

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Maturities of long-term debt as of December 31, 2008, are as follows:

*\$ in millions*

Year Ending December 31

2009	\$ 477
2010	91
2011	783
2012	2
2013	2
Thereafter	2,533
Total principal payments	3,888
Unamortized premium on long-term debt, net of discount	32
Total long-term debt	\$ 3,920

The premium on long-term debt primarily represents non-cash fair market value adjustments resulting from acquisitions, which are amortized over the life of the related debt.

**15. LITIGATION**

*U.S. Government Investigations and Claims* Departments and agencies of the U.S. Government have the authority to investigate various transactions and operations of the company, and the results of such investigations may lead to administrative, civil or criminal proceedings, the ultimate outcome of which could be fines, penalties, repayments or compensatory or treble damages. U.S. Government regulations provide that certain findings against a contractor may lead to suspension or debarment from future U.S. Government contracts or the loss of export privileges for a company or an operating division or subdivision. Suspension or debarment could have a material adverse effect on the company because of its reliance on government contracts.

As previously disclosed, in October 2005, the U.S. Department of Justice and a restricted U.S. Government customer apprised the company of potential substantial claims relating to certain microelectronic parts produced by the Space and Electronics Sector of former TRW Inc., now a part of the company. In the third quarter of 2006, the company proposed to settle the claims and any associated matters and recognized a pre-tax charge of \$112.5 million to cover the cost of the settlement proposal and associated investigative costs. The U.S. Government has advised the company that if continuing settlement discussions are not successful it will pursue its claims through litigation. On November 26, 2008, the U.S. Department of Justice filed a Notice of Intervention in a False Claims Act case that remains under seal in the U.S. District Court for the Central District of California. Because of the highly technical nature of the issues involved and their restricted status, because of the significant disagreement of the company with the allegations of the underlying qui tam complaint, and because of the significant disagreement between the company and the U.S. Government as to the U.S. Government's theories of liability and damages (including a material difference between the U.S. Government's damage theories and the company's offer), final resolution of this matter could take a considerable amount of time, particularly if litigation should ensue. If the U.S. Government were to be ultimately successful on its theories of liability and damages, which could be trebled under the Federal False Claims Act, the effect upon the company's consolidated financial position, results of operations, and cash flows would

materially exceed the amount provided by the company. Based upon the information available to the company to date, the company believes that it has substantive defenses but can give no assurance that its views will prevail. Accordingly, the ultimate disposition of this matter cannot presently be determined.

As previously disclosed, in the second quarter of 2007, the U.S. Coast Guard issued a revocation of acceptance under the Deepwater Program for eight converted 123-foot patrol boats (the vessels) based on alleged hull buckling and shaft alignment problems and alleged nonconforming topside equipment on the vessels. The company submitted a written response that argued that the revocation of acceptance was improper, and in late



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December 2007, the Coast Guard advised Integrated Coast Guard Systems (the contractors' joint venture for performing the Deepwater Program) that the Coast Guard is seeking \$96.1 million from the Joint Venture as a result of the revocation of acceptance of the eight vessels delivered under the 123-foot conversion program. The majority of the costs associated with the 123-foot conversion effort are associated with the alleged structural deficiencies of the vessels, which were converted under contracts with the company and a subcontractor to the company. In May 2008, the Coast Guard advised the Joint Venture that the Coast Guard would support an investigation by the U.S. Department of Justice of the Joint Venture and its subcontractors instead of pursuing its \$96.1 million claim independently. The Department of Justice had previously issued subpoenas related to the Deepwater Program, pursuant to which the company has provided responsive documents. The company recently learned that a civil False Claims Act complaint naming it as a defendant was filed under seal. The relationship between the allegations in the complaint and the U.S. Department of Justice's investigation is unclear to the company. Based upon the information available to the company to date, the company believes that it has substantive defenses to any potential claims but can give no assurance that its views will prevail.

In August 2008, the company disclosed to the Antitrust Division of the U.S. Department of Justice possible violations of federal antitrust laws in connection with the bidding process for certain maintenance contracts at a military installation in California. In February 2009, the company and the Department of Justice signed an agreement admitting the company into the Corporate Leniency Program. As a result of the company's acceptance into the Program, the company will be exempt from federal criminal prosecution and criminal fines relating to the matters the company reported to the Department of Justice if the company complies with certain conditions, including its continued cooperation with the government's investigation and its agreement to make restitution if the government was harmed by the violations.

Based upon the available information regarding matters that are subject to U.S. Government investigations, other than as set out above, the company believes, but can give no assurance, that the outcome of any such matters would not have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

*Litigation* Various claims and legal proceedings arise in the ordinary course of business and are pending against the company and its properties. Based upon the information available, the company believes that the resolution of any of these various claims and legal proceedings would not have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

As previously disclosed, the U.S. District Court for the Central District of California consolidated two separately filed Employee Retirement Income Security Act (ERISA) lawsuits, which the plaintiffs seek to have certified as class actions, into the In Re Northrop Grumman Corporation ERISA Litigation. On August 7, 2007, the Court denied plaintiffs' motion for class certification, and the plaintiffs appealed the Court's decision on class certification to the U.S. Court of Appeals for the Ninth Circuit. On October 11, 2007, the Ninth Circuit granted appellate review, which delayed the commencement of trial previously scheduled to begin January 22, 2008. The company believes that the outcome of these matters would not have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

*Insurance Recovery* Property damage from Hurricane Katrina is covered by the company's comprehensive property insurance program. The insurance provider for coverage of property damage losses over \$500 million, Factory Mutual Insurance Company (FM Global), has advised management of a disagreement regarding coverage for certain losses above \$500 million. As a result, the company has taken legal action against the insurance provider as the company believes that its insurance policies are enforceable and intends to pursue all of its available rights and remedies. In

August 2007, the district court in which the litigation is pending issued an order finding that the excess insurance policy provided coverage for the company's Katrina related loss. In November 2007, FM Global filed a notice of appeal of the district court's order. On August 14, 2008, the U.S. Court of Appeals for the Ninth Circuit reversed the earlier summary judgment order in favor of the company, holding that the FM excess policy unambiguously excludes damage from the storm surge caused by Hurricane Katrina under its "Flood" exclusion. The Court of Appeals remanded the case to the district court to determine whether

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the California efficient proximate cause doctrine affords the company coverage under the policy even if the Flood exclusion of the policy is unambiguous. The company filed a Petition for Rehearing En Banc, or in the Alternative, For Panel Rehearing with the Court of Appeals on August 27, 2008. On January 6, 2009, the Court of Appeals ordered FM Global to respond to the Petition for Rehearing by January 30, 2009. FM Global filed its opposition to the Petition for Rehearing and the company now awaits the Court of Appeal's decision. Based on the current status of the assessment and claim process, no assurances can be made as to the ultimate outcome of this matter. No receivable has been recognized by the company in the accompanying consolidated financial statements for insurance recoveries from FM Global.

*Provisions for Legal & Investigative Matters* Litigation accruals are recorded as charges to earnings when management, after taking into consideration the facts and circumstances of each matter, including any settlement offers, has determined that it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. The ultimate resolution of any exposure to the company may vary from earlier estimates as further facts and circumstances become known.

### **16. COMMITMENTS AND CONTINGENCIES**

*Contract Performance Contingencies* Contract profit margins may include estimates of revenues not contractually agreed to between the customer and the company for matters such as contract changes, negotiated settlements, claims and requests for equitable adjustment for previously unanticipated contract costs. These estimates are based upon management's best assessment of the underlying causal events and circumstances, and are included in determining contract profit margins to the extent of expected recovery based on contractual entitlements and the probability of successful negotiation with the customer. As of December 31, 2008, the amounts related to the aforementioned items are not material individually or in the aggregate.

*Environmental Matters* In accordance with company policy on environmental remediation, the estimated cost to complete remediation has been accrued where it is probable that the company will incur such costs in the future to address environmental impacts at currently or formerly owned or leased operating facilities, or at sites where it has been named a Potentially Responsible Party (PRP) by the Environmental Protection Agency, or similarly designated by other environmental agencies. To assess the potential impact on the company's consolidated financial statements, management estimates the total reasonably possible remediation costs that could be incurred by the company, taking into account currently available facts on each site as well as the current state of technology and prior experience in remediating contaminated sites. These estimates are reviewed periodically and adjusted to reflect changes in facts and technical and legal circumstances. Management estimates that as of December 31, 2008, the range of reasonably possible future costs for environmental remediation sites is \$186 million to \$279 million, of which \$231 million is accrued in other current liabilities. Factors that could result in changes to the company's estimates include: modification of planned remedial actions, increases or decreases in the estimated time required to remediate, discovery of more extensive contamination than anticipated, changes in laws and regulations affecting remediation requirements, and improvements in remediation technology. Should other PRPs not pay their allocable share of remediation costs, the company may have to incur costs in addition to those already estimated and accrued. Although management cannot predict whether new information gained as projects progress will materially affect the estimated liability accrued, management does not anticipate that future remediation expenditures will have a material adverse effect on the company's consolidated financial position, results of operations, or cash flows.

*Hurricane Impacts* During the third quarter of 2008, the Gulf Coast shipyards were affected by Hurricane Gustav. As a result of the storm, the Gulf Coast shipyards experienced a shut-down for several days, and a resulting minor

delay in ship construction throughout the yards; however the storm caused no significant physical damage to the yards. Shipbuilding's sales and operating income in 2008 were reduced by approximately \$100 million and \$13 million, respectively, due to lost production and additional costs resulting from the shut-down.

Also during the third quarter of 2008, a subcontractor's operations in Texas were severely impacted by Hurricane Ike. The subcontractor produces compartments for two of the LPD amphibious transport dock ships under

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construction at the Gulf Coast shipyards. As a result of the delays and cost growth caused by the subcontractor's production delays, Shipbuilding's 2008 operating income was reduced by approximately \$23 million.

In August 2005, the company's Gulf Coast operations were significantly impacted by Hurricane Katrina and the company's shipyards in Louisiana and Mississippi sustained significant windstorm damage from the hurricane. As a result of the storm, the company incurred costs to replace or repair destroyed or damaged assets, suffered losses under its contracts, and incurred substantial costs to clean up and recover its operations. As of the date of the storm, the company had a comprehensive insurance program that provided coverage for, among other things, property damage, business interruption impact on net profitability, and costs associated with clean-up and recovery. The company has recovered a portion of its Hurricane Katrina claim and expects that its remaining claim will be resolved separately with the two remaining insurers, including FM Global (See Note 15).

The company has full entitlement to any insurance recoveries related to business interruption impacts on net profitability resulting from these hurricanes. However, because of uncertainties concerning the ultimate determination of recoveries related to business interruption claims, in accordance with company policy no such amounts are recognized until they are resolved with the insurers. Furthermore, due to the uncertainties with respect to the company's disagreement with FM Global in relation to the Hurricane Katrina claim, no receivables have been recognized by the company in the accompanying condensed consolidated financial statements for insurance recoveries from FM Global.

In accordance with U.S. Government cost accounting regulations affecting the majority of the company's contracts, the cost of insurance premiums for property damage and business interruption coverage, other than coverage of profit, is an allowable expense that may be charged to long-term contracts. Because a substantial portion of long-term contracts at the shipyards are flexibly-priced, the government customer would benefit from a portion of insurance recoveries in excess of the net book value of damaged assets and clean-up and restoration costs paid by the company. When such insurance recoveries occur, the company is obligated to return a portion of these amounts to the government.

*Co-Operative Agreements* In 2003, Shipbuilding executed agreements with the states of Mississippi and Louisiana whereby Shipbuilding leases facility improvements and equipment from Mississippi and from a non-profit economic development corporation in Louisiana in exchange for certain commitments by Shipbuilding to these states. As of December 31, 2008, Shipbuilding has fully met its obligations under the Mississippi agreement and has met all but one requirement under the Louisiana agreement. Failure by Shipbuilding to meet the remaining Louisiana commitment would result in reimbursement by Shipbuilding to Louisiana in accordance with the agreement. As of December 31, 2008, Shipbuilding expects that the remaining commitment under the Louisiana agreement will be met based on its most recent business plan.

*Financial Arrangements* In the ordinary course of business, the company uses standby letters of credit and guarantees issued by commercial banks and surety bonds issued by insurance companies principally to guarantee the performance on certain contracts and to support the company's self-insured workers' compensation plans. At December 31, 2008, there were \$489 million of unused stand-by letters of credit, \$134 million of bank guarantees, and \$459 million of surety bonds outstanding.

The company has also guaranteed a \$200 million loan made to Shipbuilding in connection with the Gulf Opportunity Zone Industrial Revenue Bonds issued in December 2006. Under the loan agreement the company guaranteed Shipbuilding's repayment of the principal and interest to the Trustee. The company also guaranteed payment of the principal and interest by the Trustee to the underlying bondholders. See Note 14.

*Indemnifications* The company has retained certain warranty, environmental, income tax, and other potential liabilities in connection with certain divestitures. The settlement of these liabilities is not expected to have a material adverse effect on the company's consolidated financial position, results of operations, or cash flows.

*U.S. Government Claims* During the second quarter of 2006, the U.S. Government advised the company of claims and penalties concerning certain potential disallowed costs. The parties are engaged in discussions to

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enable the company to evaluate the merits of these claims as well as to assess the amounts being claimed. The company does not believe, but can give no assurance, that the outcome of any such matters would have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

*Operating Leases* Rental expense for operating leases, excluding discontinued operations, was \$584 million in 2008, \$584 million in 2007, and \$548 million in 2006. These amounts are net of immaterial amounts of sublease rental income. Minimum rental commitments under long-term noncancellable operating leases as of December 31, 2008, total approximately \$2.1 billion, which are payable as follows: 2009 \$459 million; 2010 \$366 million; 2011 \$270 million; 2012 \$227 million; 2013 \$176 million; and thereafter \$562 million.

*Related Party Transactions* For all periods presented, the company had no material related party transactions.

**17. RETIREMENT BENEFITS**

**Plan Descriptions**

*Defined Benefit Pension Plans* The company sponsors several defined benefit pension plans in the U.S. covering the majority of its employees. Pension benefits for most employees are based on the employee's years of service and compensation. It is the policy of the company to fund at least the minimum amount required for all qualified plans, using actuarial cost methods and assumptions acceptable under U.S. Government regulations, by making payments into benefit trusts separate from the company. The pension benefit for most employees is based upon criteria whereby employees earn age and service points over their employment period.

*Defined Contribution Plans* The company also sponsors 401(k) defined contribution plans in which most employees are eligible to participate, as well as certain bargaining unit employees. Company contributions for most plans are based on a cash matching of employee contributions up to 4 percent of compensation. Certain hourly employees are covered under a target benefit plan. The company also participates in a multiemployer plan for certain of the company's union employees. In addition to the 401(k) defined contribution benefit, non-union represented employees hired after June 30, 2008, are eligible to participate in a defined contribution program in lieu of a defined benefit pension plan. The company's contributions to these defined contribution plans for the years ended December 31, 2008, 2007, and 2006, were \$311 million, \$294 million, and \$266 million, respectively.

*Non-U.S. Benefit Plans* The company sponsors several benefit plans for non-U.S. employees. These plans are designed to provide benefits appropriate to local practice and in accordance with local regulations. Some of these plans are funded using benefit trusts separate from the company.

*Medical and Life Benefits* The company provides a portion of the costs for certain health care and life insurance benefits for a substantial number of its active and retired employees. Covered employees achieve eligibility to participate in these contributory plans upon retirement from active service if they meet specified age and years of service requirements. Qualifying dependents are also eligible for medical coverage. Approximately 65 percent of the company's current retirees participate in the medical plans. The company reserves the right to amend or terminate the plans at any time. In November 2006, the company adopted plan amendments and communicated to plan participants that it would cap the amount of its contributions to substantially all of its remaining post retirement medical and life benefit plans that were previously not subject to limits on the company's contributions.

In addition to a medical inflation cost-sharing feature, the plans also have provisions for deductibles, co-payments, coinsurance percentages, out-of-pocket limits, conformance to a schedule of reasonable fees, the use of managed care

providers, and maintenance of benefits with other plans. The plans also provide for a Medicare carve-out, and a maximum lifetime benefit of \$2 million per covered individual. Subsequent to January 1, 2005 (or earlier at some segments), newly hired employees are not eligible for post employment medical and life benefits.

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The effect of the Medicare prescription drug subsidy from the Medicare Prescription Drug, Improvement and Modernization Act of 2003 to reduce the company's net periodic postretirement benefit cost and accumulated postretirement benefit obligation for the periods presented was not material.

**Summary Plan Results**

The cost to the company of its retirement benefit plans in each of the three years ended December 31 is shown in the following table:

<i>\$ in millions</i>	Pension Benefits			Medical and Life Benefits		
	2008	2007	2006	2008	2007	2006
<b>Components of Net Periodic Benefit Cost</b>						
Service cost	\$ 721	\$ 786	\$ 755	\$ 55	\$ 52	\$ 69
Interest cost	1,335	1,250	1,159	166	164	183
Expected return on plan assets	(1,895)	(1,774)	(1,572)	(64)	(58)	(52)
Amortization of						
Prior service cost (credit)	40	40	35	(65)	(65)	(16)
Net loss from previous years	24	48	91	22	25	31
Other		2				
Net periodic benefit cost	\$ 225	\$ 352	\$ 468	\$ 114	\$ 118	\$ 215

The table below summarizes the changes in the components of unrecognized benefit plan costs for the years ended December 31, 2008 and 2007:

<i>\$ in millions</i>	Pension Benefits	Medical and Life Benefits	Total
<b>Changes in Unrecognized Benefit Plan Costs</b>			
Net actuarial loss	\$ (854)	\$ (90)	\$ (944)
Prior service cost (credit)	17	(3)	14
Amortization of			
Prior service (cost) credit	(40)	65	25
Net loss from previous years	(48)	(25)	(73)
Tax benefits related to above items	365	19	384
Changes in unrecognized benefit plan costs 2007	(560)	(34)	(594)
Net actuarial loss	4,558	132	4,690
Prior service cost (credit)	73	30	103
Amortization of			
Prior service (cost) credit	(40)	65	25
Net loss from previous years	(24)	(22)	(46)

Tax benefits related to above items	(1,807)	(81)	(1,888)
<b>Changes in unrecognized benefit plan costs 2008</b>	<b>\$ 2,760</b>	<b>\$ 124</b>	<b>\$ 2,884</b>

The following tables set forth the funded status and amounts recognized in the consolidated statements of financial position for the company's defined benefit pension and retiree health care and life insurance benefit plans. Pension benefits data include the qualified plans as well as 22 domestic unfunded non-qualified plans for benefits provided to directors, officers, and certain employees. The company uses a December 31 measurement

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date for all of its plans. Effective December 31, 2006, the company adopted SFAS No. 158, which requires the recognition of the funded status of a defined benefit pension or postretirement plan in the consolidated statements of financial position.

<i>\$ in millions</i>	Pension Benefits		Medical and Life Benefits	
	2008	2007	2008	2007
<b>Change in Benefit Obligation</b>				
Benefit obligation at beginning of year	\$ 22,069	\$ 21,484	\$ 2,812	\$ 2,867
Service cost	721	786	55	52
Interest cost	1,335	1,250	166	164
Plan participants' contributions	14	24	78	84
Plan amendments	73	18	30	(2)
Actuarial gain	(818)	(357)	(170)	(103)
Benefits paid	(1,179)	(1,157)	(269)	(250)
Acquisitions, divestitures, transfers and other	(68)	21	14	
Benefit obligation at end of year	22,147	22,069	2,716	2,812
<b>Change in Plan Assets</b>				
Fair value of plan assets at beginning of year	22,891	21,407	951	880
(Loss) / Gain on plan assets	(3,500)	2,275	(238)	46
Employer contributions	320	342	181	191
Plan participants' contributions	14	24	78	84
Benefits paid	(1,179)	(1,157)	(269)	(250)
Acquisitions, divestitures, transfers and other	(45)		15	
Fair value of plan assets at end of year	18,501	22,891	718	951
Funded status	\$ (3,646)	\$ 822	\$ (1,998)	\$ (1,861)
<b>Amounts Recognized in the Consolidated Statements of Financial Position</b>				
Non-current assets	\$ 266	\$ 2,033	\$ 24	\$ 47
Current liability	(45)	(43)	(66)	(68)
Non-current liability	(3,867)	(1,168)	(1,956)	(1,840)

The following table shows those amounts expected to be recognized in net periodic benefit cost in 2009:

<i>\$ in millions</i>	Pension Benefits	Medical and Life Benefits
<b>Amounts Expected to be Recognized in 2009 Net Periodic Benefit Cost</b>		
Net loss	\$ 339	\$ 28

Prior service cost (credit)	47	(60)
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The accumulated benefit obligation for all defined benefit pension plans was \$20.4 billion and \$20.1 billion at December 31, 2008 and 2007, respectively.

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<i>\$ in millions</i>	Pension Benefits		Medical and Life Benefits	
	2008	2007	2008	2007
<b>Amounts Recorded in Accumulated Other Comprehensive Loss</b>				
Net actuarial loss	\$ (5,509)	\$ (975)	\$ (539)	\$ (429)
Prior service cost and net transition obligation	(287)	(254)	357	452
Income tax benefits related to above items	2,286	479	72	(9)
Unamortized benefit plan costs	\$ (3,510)	\$ (750)	\$ (110)	\$ 14

Amounts for pension plans with accumulated benefit obligations in excess of fair value of plan assets are as follows:

<i>\$ in millions</i>	December 31,	
	2008	2007
Projected benefit obligation	\$ 19,926	\$ 1,772
Accumulated benefit obligation	18,217	1,407
Fair value of plan assets	16,036	722

**Plan Assumptions**

On a weighted-average basis, the following assumptions were used to determine the benefit obligations and the net periodic benefit cost:

	Pension Benefits		Medical and Life Benefits	
	2008	2007	2008	2007
<b>Assumptions Used to Determine Benefit Obligation at December 31</b>				
Discount rate	6.25%	6.22%	6.25%	6.12%
Rate of compensation increase	4.00%	4.25%		
Initial health care cost trend rate assumed for the next year			7.50%	8.00%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)			5.00%	5.00%
Year that the rate reaches the ultimate trend rate			2014	2012
<b>Assumptions Used to Determine Benefit Cost for the Year Ended December 31</b>				
Discount rate	6.22%	5.97%	6.12%	5.91%
Expected long-term return on plan assets	8.50%	8.50%	6.85%	6.75%
Rate of compensation increase	4.25%	4.25%		
Initial health care cost trend rate assumed for the next year			8.00%	8.75%
			5.00%	5.00%

Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)

Year that the rate reaches the ultimate trend rate

**2012**

2010

The discount rate is generally based on the yield on high-quality corporate fixed-income investments. At the end of each year, the discount rate is primarily determined using the results of bond yield curve models based on a portfolio of high quality bonds matching the notional cash inflows with the expected benefit payments for each significant benefit plan.

The assumptions used for pension benefits are consistent with those used for retiree medical and life insurance benefits. The long-term rate of return on plan assets used for the medical and life benefits are reduced to allow

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for the impact of tax on expected returns as, unlike the pension trust, the earnings of certain Voluntary Employee Beneficiary Association (VEBA) trusts are taxable.

Through consultation with investment advisors, expected long-term returns for each of the plans' strategic asset classes were developed. Several factors were considered, including survey of investment managers' expectations, current market data such as yields/price-earnings ratios, and historical market returns over long periods. Using policy target allocation percentages and the asset class expected returns, a weighted-average expected return was calculated.

A one-percentage-point change in the initial through the ultimate health care cost trend rates would have the following effects:

<i>\$ in millions</i>	1-Percentage-Point Increase	1-Percentage-Point Decrease
<b>Increase (Decrease) From Change In Health Care Cost Trend Rates To</b>		
Postretirement benefit expense	\$ 8	\$ (8)
Postretirement benefit liability	80	(90)

**Plan Assets and Investment Policy**

Weighted-average asset allocations at December 31 by asset category are as follows:

	Pension Plan Assets		Medical and Life Benefits Plan Assets	
	2008	2007	2008	2007
Equity securities	22%	48%	51%	74%
Debt securities	54	34	34	20
Real estate	7	6	4	2
Private equity and hedge funds	17	12	11	4
Total	100%	100%	100%	100%

Plan assets are invested in various asset classes that are expected to produce a sufficient level of diversification and investment return over the long term. The investment goals are (1) to exceed the assumed actuarial rate of return over the long term within reasonable and prudent levels of risk, and (2) to preserve the real purchasing power of assets to meet future obligations. Liability studies are conducted on a regular basis to provide guidance in setting investment goals with an objective to balance risk. Risk targets are established and monitored against acceptable ranges.

All investment policies and procedures are designed to ensure that the plans' investments are in compliance with ERISA. Guidelines are established defining permitted investments within each asset class. Derivatives are used for transitioning assets, asset class rebalancing, managing currency risk, and for management of fixed income and alternative investments. The investment policies for most of the pension plans were changed during 2008 and require that the asset allocation be maintained within the following ranges as of December 31, 2008:

	Asset Allocation Ranges	
U.S. equity	10	30%
International equity	5	25%
Long bonds	35	50%
Real estate and other	20	30%

At December 31, 2008, and 2007, plan assets included investments with non-readily determinable fair values comprised primarily of real estate, private equity, and hedge funds, totaling \$4.4 billion and \$4.1 billion,

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respectively. For these assets, estimates of fair value are determined using the best information available. At December 31, 2008, and 2007, the pension and health and welfare trusts did not hold any Northrop Grumman common stock.

In 2009, the company expects to contribute the required minimum funding level of approximately \$126 million to its pension plans and approximately \$178 million to its other postretirement benefit plans and also expects to make additional voluntary pension contributions of approximately \$250 million in each of the first and third quarters. During 2008 and 2007, the company made voluntary pension contributions of \$200 million in each year.

It is not expected that any assets will be returned to the company from the benefit plans during 2009.

**Benefit Payments**

The following table reflects estimated future benefit payments, based upon the same assumptions used to measure the benefit obligation, and includes expected future employee service, as of December 31, 2008:

<i>\$ in millions</i>	Pension Plans	Medical and Life Plans
Year Ending December 31		
2009	\$ 1,147	\$ 205
2010	1,216	207
2011	1,291	209
2012	1,353	212
2013	1,424	218
2014 through 2018	8,367	1,198

**18. STOCK COMPENSATION PLANS****Plan Descriptions**

At December 31, 2008, Northrop Grumman had stock-based compensation awards outstanding under the following plans: the 2001 Long-Term Incentive Stock Plan (2001 LTISP), the 1993 Long-Term Incentive Stock Plan (1993 LTISP), both applicable to employees, and the 1993 Stock Plan for Non-Employee Directors (1993 SPND) and 1995 Stock Plan for Non-Employee Directors (1995 SPND) as amended. All of these plans were approved by the company's shareholders. The company has historically issued new shares to satisfy award grants.

*Employee Plans* The 2001 LTISP and the 1993 LTISP permit grants to key employees of three general types of stock incentive awards: stock options, stock appreciation rights (SARs), and stock awards. Each stock option grant is made with an exercise price either at the closing price of the stock on the date of grant (market options) or at a premium over the closing price of the stock on the date of grant (premium options). Outstanding stock options granted prior to 2008 generally vest in 25 percent increments over four years from the grant date under the 2001 LTISP and in years two to five under the 1993 LTISP, and grants outstanding expire ten years after the grant date. Stock options granted in 2008 vest in 33 percent increments over three years from the grant date, and grants outstanding expire seven years after the grant date. No SARs have been granted under either of the LTISPs. Stock awards, in the form of restricted performance stock rights and restricted stock rights, are granted to key employees without payment to the company.

Under the 2001 LTISP, recipients of restricted performance stock rights earn shares of stock, based on financial metrics determined by the Board of Directors in accordance with the plan. For grants prior to 2007, if the objectives have not been met at the end of the applicable performance period, up to 100 percent of the original grant for the eight highest compensated employees and up to 70 percent of the original grant for all other recipients will be forfeited. If the financial metrics are met or exceeded during the performance period, all recipients can earn up to 150 percent of the original grant. Beginning in 2007, all members of the Corporate Policy Council could forfeit up to 100 percent of the original 2007 grant, and all recipients could earn up to

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200 percent of the original 2007 grant. Restricted stock rights issued under either plan generally vest after three years. Termination of employment can result in forfeiture of some or all of the benefits extended. Of the 50 million shares approved for issuance under the 2001 LTISP, approximately 16 million shares were available for future grants as of December 31, 2008.

*Non-Employee Plans* Under the 1993 SPND, half of the retainer fee earned by each director must be deferred into a stock unit account. In addition, directors may defer payment of all or part of the remaining retainer fee, which is placed in a stock unit account until the conclusion of board service. The 1995 SPND provided for annual stock option grants. Effective June 1, 2005, no new grants have been issued from this plan. The 1995 SPND was amended in May 2007 to permit payment of the stock unit portion of the retainer fee described above. Each grant of stock options under the 1995 SPND was made at the closing market price on the date of the grant, was immediately exercisable, and expires ten years after the grant date. At December 31, 2008, approximately 315,000 shares were available for future grants under the 1995 SPND and 2,427 shares were available for future use under the 1993 SPND.

**Compensation Expense**

Total stock-based compensation for the years ended December 31, 2008, 2007, and 2006, was \$111 million, \$196 million, and \$202 million, respectively, of which \$15 million, \$12 million, and \$11 million related to Stock Options and \$96 million, \$184 million, and \$191 million, related to Stock Awards, respectively. Tax benefits recognized in the consolidated statements of operations and comprehensive (loss) income for stock-based compensation during the years ended December 31, 2008, 2007, and 2006, were \$44 million, \$77 million, and \$71 million, respectively. In addition, the company realized tax benefits of \$26 million from the exercise of Stock Options and \$99 million from the issuance of Stock Awards in 2008.

**Stock Options**

The fair value of each of the company's Stock Option awards is estimated on the date of grant using a Black-Scholes option-pricing model that uses the assumptions noted in the table below. The fair value of the company's Stock Option awards is expensed on a straight-line basis over the vesting period of the options, which is generally three to four years. Expected volatility is based on an average of (1) historical volatility of the company's stock and (2) implied volatility from traded options on the company's stock. The risk-free rate for periods within the contractual life of the Stock Option award is based on the yield curve of a zero-coupon U.S. Treasury bond on the date the award is granted with a maturity equal to the expected term of the award. The company uses historical data to estimate future forfeitures. The expected term of awards granted is derived from historical experience under the company's stock-based compensation plans and represents the period of time that awards granted are expected to be outstanding.

The significant weighted-average assumptions relating to the valuation of the company's Stock Options for the years ended December 31, 2008, 2007, and 2006, was as follows:

	<b>2008</b>	<b>2007</b>	<b>2006</b>
Dividend yield	<b>1.8%</b>	2.0%	1.6%
Volatility rate	<b>20%</b>	20%	25%
Risk-free interest rate	<b>2.8%</b>	4.6%	4.6%
Expected option life (years)	<b>6</b>	6	6

The weighted-average grant date fair value of Stock Options granted during the years ended December 31, 2008, 2007, and 2006, was \$15, \$15, and \$17, per share, respectively.



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Stock Option activity for the year ended December 31, 2008, was as follows:

	Shares Under Option (in thousands)	Weighted- Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value (\$ in millions)
<b>Outstanding at January 1, 2008</b>	<b>14,883</b>	<b>\$ 51</b>	<b>4.6 years</b>	<b>\$ 416</b>
Granted	1,335	80		
Exercised	(2,424)	48		
Cancelled and forfeited	(313)	60		
<b>Outstanding at December 31, 2008</b>	<b>13,481</b>	<b>\$ 54</b>	<b>4.2 years</b>	<b>\$ 18</b>
Vested and expected to vest in the future at December 31, 2008	13,385	\$ 54	<b>4.2 years</b>	\$ 18
Exercisable at December 31, 2008	11,502	\$ 50	<b>3.7 years</b>	\$ 18
Available for grant at December 31, 2008	<b>11,117</b>			

The total intrinsic value of options exercised during the years ended December 31, 2008, 2007, and 2006, was \$66 million, \$153 million, and \$149 million, respectively. Intrinsic value is measured using the fair market value at the date of exercise (for options exercised) or at December 31, 2008 (for outstanding options), less the applicable exercise price.

*Stock Awards* Compensation expense for Stock Awards is measured at the grant date based on fair value and recognized over the vesting period. The fair value of Stock Awards is determined based on the closing market price of the company's common stock on the grant date. For purposes of measuring compensation expense, the amount of shares ultimately expected to vest is estimated at each reporting date based on management's expectations regarding the relevant performance criteria. In the table below, the share adjustment resulting from the final performance measure is considered granted in the period that the related grant is vested. During the year ended December 31, 2008, 2.9 million shares of common stock were issued to employees in settlement of prior year Stock Awards that were fully vested, with a total value upon issuance of \$233 million and a grant date fair value of \$155 million. In 2009, the company expects to issue to employees an additional 2.5 million shares of common stock that were vested in 2008, with a grant date fair value of \$162 million. During the year ended December 31, 2007, 2.6 million shares of common stock were issued to employees in settlement of prior year stock awards that were fully vested, with a total value upon issuance of \$199 million and a grant date fair value of \$125 million. During the year ended December 31, 2006, 2.4 million shares were issued to employees in settlement of prior year Stock Awards that were fully vested, with a total value upon issuance of \$143 million and a grant date fair value of \$133 million. There were 3.6 and 4.2 million Stock Awards granted for the years ended December 31, 2007, and 2006 with a weighted-average grant date fair value of \$63 and \$63 per share, respectively.



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Stock Award activity for the year ended December 31, 2008, was as follows:

	Stock Awards (in thousands)	Weighted-Average Grant Date Fair Value	Weighted-Average Remaining Contractual Term
<b>Outstanding at January 1, 2008</b>	<b>5,144</b>	<b>\$ 67</b>	<b>1.3 years</b>
Granted (including performance adjustment on shares vested)	1,299	81	
Vested	(2,744)	72	
Forfeited	(423)	65	
<b>Outstanding at December 31, 2008</b>	<b>3,276</b>	<b>\$ 75</b>	<b>1.4 years</b>
Available for grant at December 31, 2008	<b>5,278</b>		

*Unrecognized Compensation Expense* At December 31, 2008, there was \$158 million of unrecognized compensation expense related to unvested awards granted under the company's stock-based compensation plans, of which \$20 million relates to Stock Options and \$138 million relates to Stock Awards. These amounts are expected to be charged to expense over a weighted-average period of 1.4 years.

**19. UNAUDITED SELECTED QUARTERLY DATA**

Unaudited quarterly financial results are set forth in the following tables. The financial results for all periods presented have been revised to reflect the various business dispositions that occurred during the 2007 and 2008 fiscal years (see Note 6 for further details). The company's common stock is traded on the New York Stock Exchange (trading symbol NOC). This unaudited quarterly information is labeled using a calendar convention; that is, first quarter is consistently labeled as ended on March 31, second quarter as ended on June 30, and third quarter as ended on September 30. It is the company's long-standing practice to establish actual interim closing dates using a fiscal calendar, which requires the businesses to close their books on a Friday, in order to normalize the potentially disruptive effects of quarterly closings on business processes. The effects of this practice only exist within a reporting year.

**2008**

<i>\$ in millions, except per share</i>	<b>1st Qtr</b>	<b>2nd Qtr</b>	<b>3rd Qtr</b>	<b>4th Qtr</b>
Sales and service revenues	\$ 7,724	\$ 8,628	\$ 8,381	\$ 9,154
Operating income (loss)	464	806	771	(2,152)
Earnings (loss) from continuing operations	263	483	509	(2,536)
Net earnings (loss)	264	495	512	(2,533)
Basic earnings (loss) per share from continuing operations	.78	1.42	1.52	(7.76)
Basic earnings (loss) per share	.78	1.46	1.53	(7.75)
Diluted earnings (loss) per share from continuing operations	.76	1.40	1.50	(7.76)
Diluted earnings (loss) per share	.76	1.44	1.51	(7.75)

*Significant 2008 Fourth Quarter Events* In the fourth quarter of 2008, the company recorded a non-cash, after-tax charge of \$3.1 billion for impairment of goodwill, a non-cash, after-tax adjustment to accumulated other comprehensive loss of \$2.9 billion for the change in funded status of pension and postretirement benefits, and made a \$200 million voluntary pre-funding payment to the company's pension plans.

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**Table of Contents****NORTHROP GRUMMAN CORPORATION****2007**

<i>\$ in millions, except per share</i>	<b>1st Qtr</b>	<b>2nd Qtr</b>	<b>3rd Qtr</b>	<b>4th Qtr</b>
Sales and service revenues	\$ 7,314	\$ 7,878	\$ 7,871	\$ 8,765
Operating income	690	763	806	759
Earnings from continuing operations	394	472	488	457
Net earnings	387	460	489	454
Basic earnings per share from continuing operations	1.14	1.37	1.43	1.35
Basic earnings per share	1.12	1.34	1.44	1.34
Diluted earnings per share from continuing operations	1.12	1.35	1.40	1.32
Diluted earnings per share	1.10	1.31	1.40	1.31

*Significant 2007 Fourth Quarter Events* In the fourth quarter of 2007, the company's Board of Directors authorized the repurchase of up to \$2.5 billion of its outstanding common stock and the company made a voluntary pre-funding payment to the company's pension plans of \$200 million.

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**NORTHROP GRUMMAN CORPORATION**

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

No information is required in response to this item.

**Item 9A. Controls and Procedures**

**Disclosure Controls and Procedures**

The company's principal executive officer (Chairman and Chief Executive Officer) and principal financial officer (Corporate Vice President and Chief Financial Officer) have evaluated the company's disclosure controls and procedures as of December 31, 2008, and have concluded that these controls and procedures are effective to ensure that information required to be disclosed by the company in the reports that it files or submits under the Securities Exchange Act of 1934 (15 USC § 78a et seq) is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms. These disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the company in the reports that it files or submits is accumulated and communicated to management, including the principal executive officer and the principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

**Changes in Internal Control Over Financial Reporting**

During the fourth quarter of 2008, no change occurred in the company's internal control over financial reporting that materially affected, or is likely to materially affect, the company's internal control over financial reporting.

**Item 9B. Other Information**

No information is required in response to this item.

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**NORTHROP GRUMMAN CORPORATION**

**MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

The management of Northrop Grumman Corporation (the company) prepared and is responsible for the consolidated financial statements and all related financial information contained in this Annual Report. This responsibility includes establishing and maintaining effective internal control over financial reporting. The company's internal control over financial reporting was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

To comply with the requirements of Section 404 of the Sarbanes-Oxley Act of 2002, the company designed and implemented a structured and comprehensive assessment process to evaluate its internal control over financial reporting across the enterprise. The assessment of the effectiveness of the company's internal control over financial reporting was based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Management regularly monitors its internal control over financial reporting, and actions are taken to correct any deficiencies as they are identified. Based on its assessment, management has concluded that the company's internal control over financial reporting is effective as of December 31, 2008.

Deloitte & Touche LLP issued an attestation report dated February 10, 2009, concerning the company's internal control over financial reporting, which is contained in this Annual Report. The company's consolidated financial statements as of and for the year ended December 31, 2008, have been audited by the independent registered public accounting firm of Deloitte & Touche LLP in accordance with the standards of the Public Company Accounting Oversight Board (United States).

/s/ Ronald D. Sugar  
Chairman and Chief Executive Officer

/s/ James F. Palmer  
Corporate Vice President and Chief Financial Officer

February 10, 2009

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**NORTHROP GRUMMAN CORPORATION**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

To the Board of Directors and Shareholders of  
Northrop Grumman Corporation  
Los Angeles, California

We have audited the internal control over financial reporting of Northrop Grumman Corporation and subsidiaries (the Company ) as of December 31, 2008, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, based on the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements and financial statement schedule as of and for the year ended December 31, 2008 of the Company and our report dated February 10, 2009 expressed an unqualified opinion on those financial statements and the financial statement schedule.

/s/ Deloitte & Touche LLP  
Los Angeles, California  
February 10, 2009

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**Table of Contents****NORTHROP GRUMMAN CORPORATION****PART III****Item 10. Directors, Executive Officers, and Corporate Governance****Directors**

The information as to Directors will be incorporated herein by reference to the Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

**Executive Officers**

The following individuals were the executive officers of the company as of February 10, 2009:

<b>Name</b>	<b>Age</b>	<b>Office Held</b>	<b>Since</b>	<b>Prior Business Experience (Last Five Years)</b>
Ronald D. Sugar	60	Chairman and Chief Executive Officer	2006	Chairman, Chief Executive Officer and President (2003-2006); Prior to April 2003, Chief Executive Officer and President
Wesley G. Bush	47	President and Chief Operating Officer	2007	President and Chief Financial Officer (2006-2007); Prior to March 2007, Corporate Vice President and Chief Financial Officer (2005-2006); Corporate Vice President and President, Space Technology Sector (2003-2005)
James L. Cameron	51	Corporate Vice President and President, Technical Services Sector	2006	Vice President and General Manager of Defensive and Navigation Systems Divisions, Electronic Systems Sector (2005); Prior to February 2005, Vice President and General Manager, Defensive Systems Division, Electronic Systems Sector (2003-2005)
Gary W. Ervin	51	Corporate Vice President and President, Aerospace Systems Sector	2009	Corporate Vice President and President, Integrated Systems Sector (2008); Prior to 2008, Corporate Vice President (2007-2008); Vice President, Western Region, Integrated Systems Sector (2005-2007); Vice President, Air Combat Systems, Integrated Systems Sector (2002-2005)
Darryl M. Fraser	50	Corporate Vice President, Communications	2008	Sector Vice President of Business Development and Strategic Initiatives, Mission Systems Sector (2007-March 2008); Prior to May 2007, Sector Vice President, Strategic Initiatives, Mission Systems Sector (2007); Vice President, Washington Operations, Mission Systems and Space Technology Sectors (2005-2007); Vice President, Washington Operations, Mission Systems Sector (2002-2005)
Kenneth N. Heintz	62	Corporate Vice President,	2005	Independent Financial Consultant (2004-2005); Prior to June 2004, Corporate Vice President,

		Controller and Chief Accounting Officer		Hughes Electronics Corporation (now The DIRECTV Group, Inc. (2000-2004))
Robert W. Helm	57	Corporate Vice President, Business Development and Government Relations	1994	

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<b>Name</b>	<b>Age</b>	<b>Office Held</b>	<b>Since</b>	<b>Prior Business Experience (Last Five Years)</b>
Alexis C. Livanos	60	Corporate Vice President and Chief Technology Officer	2009	Corporate Vice President and President Space Technology Sector (2005-2008); Prior to 2005, Vice President and General Manager of Systems Development and Technology and Space Sensors Divisions, and Vice President and General Manager of Navigation and Space Sensors Division, Electronics Sector (2003-2005)
Linda A. Mills	59	Corporate Vice President and President, Information Systems Sector	2009	Corporate Vice President and President, Information Technology Sector (2008); Prior to 2008, President of the Civilian Agencies business group, Information Technology Sector (2007-2008); Vice President for Operations and Processes, Information Technology Sector (2005-2007); Vice President, Mission Assurance/Six Sigma, Mission Systems Sector (2003-2005)
James F. Palmer	59	Corporate Vice President and Chief Financial Officer	2007	Executive Vice President and Chief Financial Officer, Visteon Corporation (2004-2007); Prior to June 2004, Senior Vice President, The Boeing Company and President, Boeing Capital Corporation (2000-2004)
C. Michael Petters	49	Corporate Vice President and President, Shipbuilding Sector	2008	Corporate Vice President and President, Newport News Sector (2004-January 2008); Prior to November 2004, Vice President, Human Resources, Administration and Trades, Newport News Sector (2001-2004)
James F. Pitts	57	Corporate Vice President and President, Electronic Systems Sector	2005	Vice President and General Manager of Aerospace Systems Division, Electronics Sector (2001-2005)
Mark Rabinowitz	47	Corporate Vice President and Treasurer	2007	Vice President and Assistant Treasurer (2006-2007); Prior to June 2006, Corporate Director and Assistant Treasurer, Banking and Capital Markets (2003-2006)
Stephen D. Yslas	61	Corporate Vice President and General Counsel	2009	Corporate Vice President, Secretary and Deputy General Counsel (2006-2008); Prior to 2006, Corporate Vice President and Deputy General Counsel (2001-2006)
Ian V. Ziskin	50	Corporate Vice President and Chief Human Resources and	2006	Corporate Vice President, Human Resources and Leadership Strategy (2003-2005)



Administrative  
Officer

**Audit Committee Financial Expert**

The information as to the Audit Committee and the Audit Committee Financial Expert will be incorporated herein by reference to the Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

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**NORTHROP GRUMMAN CORPORATION**

**Code of Ethics**

The company has adopted Standards of Business Conduct for all of its employees, including the principal executive officer, principal financial officer and principal accounting officer. The Standards of Business Conduct can be found on the company's internet web site at [www.northropgrumman.com](http://www.northropgrumman.com) under Investor Relations Corporate Governance Overview.

The web site and information contained on it or incorporated in it are not intended to be incorporated in this Annual Report on Form 10-K or other filings with the Securities Exchange Commission.

**Corporate Governance**

On September 17, 2008, the company's Board of Directors approved amendments to the bylaws of the company, including amendments to Section 2.06. These amendments had the effect of changing the procedures by which security holders may recommend nominees to the company's Board of Directors by:

- n Shortening the advance notice required for such nominations, such that, to be timely, a stockholder's notice of a nomination must be received by the company's secretary not less than 90 or more than 120 days prior to the one-year anniversary of the date on which the company first mailed its proxy materials for the preceding year's annual meeting of stockholders; provided, however, that if the annual meeting is convened more than 30 days prior to or delayed by more than 30 days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so received not later than the close of business on the later of (i) the 135th day before such annual meeting or (ii) the 10th day following the day on which public announcement of the date of such meeting is first made;
- n Requiring a stockholder to update certain information included in a notice of nomination so that such information is supplemented by such stockholder or beneficial owner, as the case may be, not later than 10 days after the record date for the meeting to disclose such ownership as of the record date;
- n Requiring that a stockholder's notice provide any other information relating to the stockholder or beneficial owner, as applicable, that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies for, as applicable, the proposal and/or for the election of directors in a contested election pursuant to Section 14 of the Exchange Act; and
- n Requiring that, in the case of a special meeting held for the purpose of electing members of the company's Board of Directors, the written notice required for nominations by stockholders be received by the company's secretary not later than the close of business on the later of (i) the 135th day prior to such special meeting or (ii) the 10th day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting.

The amendments also provide that in no event shall an adjournment of a special meeting commence a new time period for the giving of a record stockholder's notice.

The foregoing description is a summary of the amendments to Section 2.06 of the bylaws, which is qualified in its entirety by reference to the bylaws, as amended, filed as Exhibit 3(b) to this report on Form 10-K.

**Item 11. Executive Compensation**

Information concerning Executive Compensation, including information concerning Compensation Committed Interlocks and Insider Participation and Compensation Committee Report, will be incorporated herein by reference to the Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The information as to Securities Authorized for Issuance Under Equity Compensation Plans and Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters will be

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**NORTHROP GRUMMAN CORPORATION**

incorporated herein by reference to the Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

**Item 13. Certain Relationships and Related Transactions, and Director Independence**

The information as to Certain Relationships and Related Transactions, and Director Independence will be incorporated herein by reference to the Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

**Item 14. Principal Accountant Fees and Services**

The information as to principal accountant fees and services will be incorporated herein by reference to the Proxy Statement for the 2009 Annual Meeting of Shareholders to be filed within 120 days after the end of the company's fiscal year.

**PART IV**

**Item 15. Exhibits and Financial Statement Schedule**

(a) 1. Report of Independent Registered Public Accounting Firm on the Consolidated Financial Statements

Financial Statements

Consolidated Statements of Operations and Comprehensive (Loss) Income

Consolidated Statements of Financial Position

Consolidated Statements of Cash Flows

Consolidated Statements of Changes in Shareholders' Equity

Notes to Consolidated Financial Statements

2. Financial Statement Schedule

Schedule II Valuation and Qualifying Accounts

All other schedules are omitted either because they are not applicable or not required or because the required information is included in the financial statements or notes thereto.

**Exhibits**

- 3(a) Restated Certificate of Incorporation of Northrop Grumman Corporation effective May 18, 2006 (incorporated by reference to Exhibit 3.1 to Form 8-K dated May 16, 2006 and filed May 19, 2006)
- 3(b) Bylaws of Northrop Grumman Corporation, as amended September 17, 2008 (incorporated by reference to Exhibit 3.1 to Form 10-Q for the quarter ended September 30, 2008 and filed October 22, 2008)
- 4(a) Registration Rights Agreement dated as of January 23, 2001, by and among Northrop Grumman Systems Corporation, Northrop Grumman Corporation and Unitrin, Inc. (incorporated by reference to Exhibit(d)(6) to Amendment No. 4 to Schedule TO filed January 31, 2001)

- 4(b) Indenture dated as of October 15, 1994, between Northrop Grumman Systems Corporation and JPMorgan Chase Bank (formerly The Chase Manhattan Bank), as trustee (incorporated by reference to Exhibit 4.1 to Form 8-K dated October 20, 1994, and filed October 25, 1994)
- 4(c) Form of Officer's Certificate (without exhibits) establishing the terms of Northrop Grumman Systems Corporation's 7.75 percent Debentures due 2016 and 7.875 percent Debentures due 2026 (incorporated by reference to Exhibit 4-3 to Form S-4 Registration Statement No. 333-02653 filed April 19, 1996)
- 4(d) Form of Northrop Grumman Systems Corporation's 7.75 percent Debentures due 2016 (incorporated by reference to Exhibit 4-5 to Form S-4 Registration Statement No. 333-02653 filed April 19, 1996)

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**NORTHROP GRUMMAN CORPORATION**

- 4(e) Form of Northrop Grumman Systems Corporation's 7.875 percent Debentures due 2026 (incorporated by reference to Exhibit 4-6 to Form S-4 Registration Statement No. 333-02653 filed April 19, 1996)
- 4(f) Form of Officers' Certificate establishing the terms of Northrop Grumman Systems Corporation's 7.125 percent Notes due 2011 and 7.75 percent Debentures due 2031 (incorporated by reference to Exhibit 10.9 to Form 8-K dated and filed April 17, 2001)
- 4(g) Indenture dated as of April 13, 1998, between Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) and The Bank of New York, as trustee, under which its 6.75 percent Senior Debentures due 2018 were issued (incorporated by reference to Exhibit 4.1 to the Form 10-Q of Litton Industries, Inc. for the quarter ended April 30, 1998, and filed June 15, 1998)
- 4(h) Supplemental Indenture with respect to Indenture dated April 13, 1998, dated as of April 3, 2001, among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.5 to Form 10-Q for the quarter ended March 31, 2001, filed May 10, 2001)
- 4(i) Supplemental Indenture with respect to Indenture dated April 13, 1998, dated as of December 20, 2002, among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4(q) to Form 10-K for the year ended December 31, 2002, filed March 24, 2003)
- 4(j) Senior Indenture dated as of December 15, 1991, between Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) and The Bank of New York, as trustee, under which its 7.75 percent and 6.98 percent debentures due 2026 and 2036 were issued and specimens of such debentures (incorporated by reference to Exhibit 4.1 to the Form 10-Q of Litton Industries, Inc. for the quarter ended April 30, 1996, filed June 11, 1996)
- 4(k) Supplemental Indenture with respect to Indenture dated December 15, 1991, dated as of April 3, 2001, among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.7 to Form 10-Q for the quarter ended March 31, 2001, filed May 10, 2001)
- 4(l) Supplemental Indenture with respect to Indenture dated December 15, 1991, dated as of December 20, 2002, among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4(t) to Form 10-K for the year ended December 31, 2002, filed March 24, 2003)
- 4(m) Form of Exchange Security for the \$400,000,000 8 percent senior notes due 2009 of Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) (incorporated by reference to Exhibit 4.3 to the Form 10-Q of Litton Industries, Inc. for the quarter ended April 30, 2000, filed June 9, 2000)
- 4(n) Indenture between TRW Inc. (now named Northrop Grumman Space & Mission Systems Corp.) and The Chase Manhattan Bank, as successor Trustee, dated as of May 1, 1986 (incorporated by reference to Exhibit 2 to the Form 8-A Registration Statement of TRW Inc. dated July 3, 1986)
- 4(o) First Supplemental Indenture between TRW Inc. (now named Northrop Grumman Space & Mission Systems Corp.) and The Chase Manhattan Bank, as successor Trustee, dated as of



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**NORTHROP GRUMMAN CORPORATION**

- 4(p) Fourth Supplemental Indenture between TRW Inc. (now named Northrop Grumman Space & Mission Systems Corp.) and The Chase Manhattan Bank, as successor Trustee, dated as of June 2, 1999 (incorporated by reference to Exhibit 4(e) to Form S-4 Registration Statement No. 333-83227 of TRW Inc. filed July 20, 1999)
- 10(a) Form of Amended and Restated Credit Agreement dated as of August 10, 2007, among Northrop Grumman Corporation, as Borrower; Northrop Grumman Systems Corporation and Northrop Grumman Space & Mission Systems Corp., as Guarantors; the Lenders party thereto; JPMorgan Chase Bank, N.A., as Payment Agent, an Issuing Bank, Swingline Lender and Administrative Agent; Credit Suisse, as Administrative Agent; Citicorp USA, Inc., as Syndication Agent; Deutsche Bank Securities Inc. and The Royal Bank of Scotland PLC, as Documentation Agents; and BNP Paribas as Co-Documentation Agent (incorporated by reference to Exhibit 10.1 to Form 8-K dated and filed August 13, 2007)
- 10(b) Form of Guarantee dated as of April 3, 2001, by Northrop Grumman Corporation of the indenture indebtedness issued by the former Litton Industries, Inc. (incorporated by reference to Exhibit 10.10 to Form 8-K dated and filed April 17, 2001)
- 10(c) Form of Guarantee dated as of April 3, 2001, by Northrop Grumman Corporation of Northrop Grumman Systems Corporation indenture indebtedness (incorporated by reference to Exhibit 10.11 to Form 8-K dated and filed April 17, 2001)
- 10(d) Form of Guarantee dated as of March 27, 2003, by Northrop Grumman Corporation, as Guarantor, in favor of JP Morgan Chase Bank (formerly The Chase Manhattan Bank), as trustee, of certain debt securities of Northrop Grumman Space & Mission Systems Corp. (formerly TRW Inc.) (incorporated by reference to Exhibit 4.2 to Form 10-Q for the quarter ended March 31, 2003, filed May 14, 2003)
- 10(e) Form of Guarantee dated as of January 9, 2003, by Northrop Grumman Space & Mission Systems Corp. (formerly TRW Inc.) of Northrop Grumman Systems Corporation indenture indebtedness (incorporated by reference to Exhibit 10(qq) to Form 10-K for the year ended December 31, 2002, filed March 24, 2003)
- 10(f) Northrop Grumman 1993 Long-Term Incentive Stock Plan, as amended and restated (incorporated by reference to Exhibit 4.1 to Form S-8 Registration Statement No. 333-68003 filed November 25, 1998)
- 10(g) Northrop Grumman Corporation 1993 Stock Plan for Non-Employee Directors (as Amended and Restated January 1, 2008) (incorporated by reference to Exhibit 10(g) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
- 10(h) Northrop Grumman Corporation 1995 Stock Plan for Non-Employee Directors, as Amended as of May 16, 2007 (incorporated by reference to Exhibit A to Schedule 14A filed April 12, 2007)
- 10(i) Northrop Grumman 2001 Long-Term Incentive Stock Plan (As amended September 17, 2003) (incorporated by reference to Exhibit 10.1 to Form 10-Q for the quarter ended September 30, 2003, filed November 6, 2003), as amended by First Amendment to the Northrop Grumman 2001 Long-Term Incentive Stock Plan dated December 19, 2007
  - (i) Form of Notice of Non-Qualified Grant of Stock Options and Option Agreement (incorporated by reference to Exhibit 10.5 to Form S-4 Registration Statement No. 333-83672 filed March 4, 2002)
  - (ii) Form of Agreement for 2005 Stock Options (officer) (incorporated by reference to Exhibit 10(d)(v) to Form 10-K for the year ended December 31, 2004, filed March 4, 2005)
  - (iii)



Form of letter from Northrop Grumman Corporation regarding Stock Option Retirement Enhancement (incorporated by reference to Exhibit 10.2 to Form 8-K dated March 14, 2005 and filed March 15, 2005)

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**NORTHROP GRUMMAN CORPORATION**

- (iv) Form of Restricted Performance Stock Rights Agreement applicable to 2006 Restricted Performance Stock Rights, as amended (incorporated by reference to Exhibit 10(i)(vi) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
- (v) Form of Agreement for 2006 Stock Options (officer) (incorporated by reference to Exhibit 10(d)(viii) to Form 10-K for the year ended December 31, 2005, filed February 17, 2006)
- (vi) Form of Restricted Stock Rights Agreement applicable to 2006 Restricted Stock Rights, as amended (incorporated by reference to Exhibit 10(i)(vii) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
- (vii) 2006 CPC Incentive Restricted Stock Rights Agreement of Wesley G. Bush dated May 16, 2006, as amended (incorporated by reference to Exhibit 10(i)(ix) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
- (viii) Form of Restricted Performance Stock Rights Agreement, applicable to 2007 Restricted Performance Stock Rights, as amended (incorporated by reference to Exhibit 10(i)(xi) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
- (ix) Form of Agreement for 2007 Stock Options (officers) (incorporated by reference to Exhibit 10(2)(ii) to Form 10-Q for the quarter ended March 31, 2007, filed April 24, 2007)
- (x) Terms and Conditions Applicable to Special 2007 Restricted Stock Rights Granted to James F. Palmer dated March 12, 2007, as amended (incorporated by reference to Exhibit 10(i)(xiii) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
- (xi) Form of Agreement for 2008 Stock Options (officer) (incorporated by reference to Exhibit 10(4)(i) to Form 10-Q for the quarter ended March 31, 2008, filed April 24, 2008)
- (xii) Form of Agreement for 2008 Restricted Performance Stock Rights (incorporated by reference to Exhibit 10(4)(ii) to Form 10-Q for the quarter ended March 31, 2008, filed April 24, 2008)
- 10(j) Northrop Grumman Supplemental Plan 2 (Amended and Restated Effective as of January 1, 2005) (incorporated by reference to Exhibit 10(j) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
  - (i) Appendix A: Northrop Supplemental Retirement Income Program for Senior Executives (Amended and Restated Effective as of January 1, 2005) (incorporated by reference to Exhibit 10(j)(i) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
  - (ii) Appendix B: ERISA Supplemental Program 2 as amended and restated effective October 1, 2004 (incorporated by reference to Exhibit 10(j)(ii) of Form 10-K for the year ended December 31, 2004, filed March 4, 2005)
  - \*(iii) Appendix F: CPC Supplemental Executive Retirement Program (Amended and Restated Effective as of January 1, 2005) (incorporated by reference to Exhibit 10(j)(iii) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008), as amended by First Amendment to Appendix F effective December 1, 2008
  - \*(iv) Appendix G: Officers Supplemental Executive Retirement Program (Amended and Restated Effective as of January 1, 2005) (incorporated by reference to Exhibit 10(j)(iv) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008), as

10(k) amended by First Amendment to Appendix G effective December 1, 2008  
Northrop Grumman ERISA Supplemental Plan (Amended and Restated Effective as of January 1, 2005) (incorporated by reference to Exhibit 10(k) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)

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**NORTHROP GRUMMAN CORPORATION**

10(l)	Northrop Grumman Supplementary Retirement Income Plan (formerly TRW Supplementary Retirement Income Plan) (Amended and Restated Effective January 1, 2005) (incorporated by reference to Exhibit 10(l) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
10(m)	Northrop Grumman Electronic Systems Executive Pension Plan (Amended and Restated Effective as of January 1, 2005) (incorporated by reference to Exhibit 10(m) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
*10(n)	Form of Northrop Grumman Corporation January 2009 Change in Control Severance Plan
10(o)	Form of Northrop Grumman Corporation January 2009 Special Agreement (relating to severance program for change-in-control) (incorporated by reference to Exhibit 10.1 to Form 8-K dated November 7, 2008 and filed November 13, 2008)
10(p)	Severance Plan for Elected and Appointed Officers of Northrop Grumman Corporation As amended and restated effective January 1, 2008 (incorporated by reference to Exhibit 10(p) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
10(q)	Northrop Grumman Corporation Non-Employee Directors Equity Participation Plan, as Amended and Restated January 1, 2008 (incorporated by reference to Exhibit 10(q) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
10(r)	Non-Employee Director Compensation Term Sheet, effective October 1, 2008 (incorporated by reference to Exhibit 10.1 to Form 10-Q for the quarter ended September 30, 2008, filed October 22, 2008)
10(s)	Form of Indemnification Agreement between Northrop Grumman Corporation and its directors and executive officers (incorporated by reference to Exhibit 10.39 to Form S-4 Registration Statement No. 333-83672 filed March 4, 2002)
*10(t)	Northrop Grumman Deferred Compensation Plan (Amended and Restated Effective as of January 1, 2005) (incorporated by reference to Exhibit 10(t) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008), amended by First Amendment effective December 1, 2008
10(u)	The 2002 Incentive Compensation Plan of Northrop Grumman Corporation, As amended and restated effective as of January 1, 2008 (incorporated by reference to Exhibit 10(u) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
10(v)	Northrop Grumman 2006 Annual Incentive Plan and Incentive Compensation Plan (for Non-Section 162(m) Officers), as amended and restated effective January 1, 2008 (incorporated by reference to Exhibit 10(v) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
*10(w)	Northrop Grumman Savings Excess Plan (Amended and Restated Effective as of January 1, 2008)
10(x)	Letter agreement dated December 17, 2008 between Northrop Grumman Corporation and Ronald D. Sugar relating to termination of Employment Agreement dated February 19, 2003 (incorporated by reference to Exhibit 10.2 to Form 8-K dated December 17, 2008 and filed December 19, 2008)
10(y)	Compensatory Arrangements of Certain Officers (Named Executive Officers) for 2007 and 2008 (incorporated by reference to Form 8-K dated and filed February 26, 2008)
10(z)	Offering letter dated February 1, 2007 from Northrop Grumman Corporation to James F. Palmer relating to position of Corporate Vice President and Chief Financial Officer (incorporated by reference to Exhibit 10(3) to Form 10-Q for the quarter ended March 31, 2007,

filed April 24, 2007), as amended by Amendment to Letter Agreement between Northrop Grumman Corporation and James F. Palmer dated December 17, 2008 (incorporated by reference to Exhibit 10.3 to Form 8-K dated December 17, 2008 and filed December 19, 2008)

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**NORTHROP GRUMMAN CORPORATION**

10(aa)	Litton Industries, Inc. Restoration Plan 2 (Amended and Restated Effective as of January 1, 2005) (incorporated by reference to Exhibit 10(aa) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
10(bb)	Litton Industries, Inc. Restoration Plan (Amended and Restated Effective as of January 1, 2005) (incorporated by reference to Exhibit 10(bb) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
10(cc)	Litton Industries, Inc. Supplemental Executive Retirement Plan as amended and restated effective October 1, 2004 (incorporated by reference to Exhibit 10(ee) to Form 10-K for the year ended December 31, 2004, filed March 4, 2005)
10(dd)	Northrop Grumman Supplemental Retirement Replacement Plan, as Restated, dated January 1, 2008 between Northrop Grumman Corporation and James F. Palmer (incorporated by reference to Exhibit 10.4 to Form 8-K dated December 17, 2008 and filed December 19, 2008)
10(ee)	Northrop Grumman Corporation Special Officer Retiree Medical Plan (As Amended and Restated Effective January 1, 2008) (incorporated by reference to Exhibit 10(2) to Form 10-Q for the quarter ended March 31, 2008, filed April 24, 2008)
10(ff)	Executive Life Insurance Policy (incorporated by reference to Exhibit 10(gg) to Form 10-K for the year ended December 31, 2004, filed March 4, 2005)
10(gg)	Executive Accidental Death, Dismemberment and Plegia Insurance Policy (incorporated by reference to Exhibit 10(hh) to Form 10-K for the year ended December 31, 2004, filed March 4, 2005)
10(hh)	Executive Long-Term Disability Insurance Policy as amended by Amendment No. 2 dated June 19, 2008 and effective as of October 4, 2007 (incorporated by reference to Exhibit 10(2) to Form 10-Q for the quarter ended June 30, 2008, filed July 29, 2008)
10(ii)	Executive Dental Insurance Policy Group Numbers 5134 and 5135 (incorporated by reference to Exhibit 10(m) to Form 10-K for the year ended December 31, 1995, filed February 22, 1996)
10(jj)	Group Personal Excess Liability Policy (incorporated by reference to Exhibit 10(ll) to Form 10-K for the year ended December 31, 2004, filed March 4, 2005)
10(kk)	Northrop Grumman Executive Medical Plan Benefit Matrix effective July 1, 2008 (incorporated by reference to Exhibit 10.1 to Form 10-Q for the quarter ended June 30, 2008, filed July 29, 2008)
10(ll)	Consultant Contract dated October 5, 2007 between Northrop Grumman Corporation and Scott J. Seymour (incorporated by reference to Exhibit 10.2 to Form 8-K dated and filed October 5, 2007)
*12(a)	Computation of Ratio of Earnings to Fixed Charges
*21	Subsidiaries
*23	Consent of Independent Registered Public Accounting Firm
*24	Power of Attorney
*31.1	Rule 13a-15(e)/15d-15(e) Certification of Ronald D. Sugar (Section 302 of the Sarbanes-Oxley Act of 2002)
*31.2	Rule 13a-15(e)/15d-15(e) Certification of James F. Palmer (Section 302 of the Sarbanes-Oxley Act of 2002)
**32.1	Certification of Ronald D. Sugar pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
**32.2	

Certification of James F. Palmer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

\* Filed with this Report  
\*\* Furnished with this Report

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**NORTHROP GRUMMAN CORPORATION**

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on the 10th day of February 2009.

NORTHROP GRUMMAN CORPORATION

By: **/s/ Kenneth N. Heintz**

Kenneth N. Heintz  
Corporate Vice President, Controller, and  
Chief Accounting Officer  
(Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed on behalf of the registrant this the 10th day of February 2009, by the following persons and in the capacities indicated.

<b>Signature</b>	<b>Title</b>
Ronald D. Sugar*	Chairman and Chief Executive Officer (Principal Executive Officer), and Director
James F. Palmer*	Corporate Vice President and Chief Financial Officer (Principal Financial Officer)
Lewis W. Coleman*	Director
Thomas B. Fargo	Director
Vic Fazio*	Director
Donald E. Felsinger*	Director
Stephen E. Frank*	Director
Phillip Frost*	Director
Bruce S. Gordon*	Director
Madeleine Kleiner*	Director
Karl J. Krapek*	Director
Charles R. Larson*	Director



Richard B. Myers\* Director

Aulana L. Peters\* Director

Kevin W. Sharer\* Director

\*By: **/s/ Joseph F. Coyne, Jr.**

Joseph F. Coyne, Jr.  
Corporate Vice President,  
Deputy General Counsel, and Secretary  
Attorney-in-Fact  
pursuant to a power of attorney

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Table of Contents**NORTHROP GRUMMAN CORPORATION****SCHEDULE II VALUATION AND QUALIFYING ACCOUNTS**

(\$ in millions)

Description	Balance at Beginning of Period	Additions At Cost	Changes Add (Deduct)	Balance at End of Period
Year ended December 31, 2006				
Reserves and allowances deducted <sup>(1)</sup> from asset accounts:				
Allowances for doubtful amounts	\$ 223	\$ 171	\$ (86)	\$ 308
Valuation allowance on deferred tax assets	1,339		(39)	1,300
Year ended December 31, 2007				
Reserves and allowances deducted <sup>(1)</sup> from asset accounts:				
Allowances for doubtful amounts	\$ 308	\$ 124	\$ (146)	\$ 286
Valuation allowance on deferred tax assets	1,300	3	(711)	592
Year ended December 31, 2008				
Reserves and allowances deducted <sup>(1)</sup> from asset accounts:				
Allowances for doubtful amounts	\$ 286	\$ 121	\$ (106)	\$ 301
Valuation allowance on deferred tax assets	592		(559)	33

(1) Uncollectible amounts written off, net of recoveries.