

ALASKA LEGISLATURE COMMITTEE FILES 2007-2008 HISTA 12380

SUDAN DIVESTMENT TASK FORCE

intimidation by military and security forces, and through bureaucratic and administrative obstruction, in an attempt to inflict the most devastating harm on those individuals displaced from their villages and homes without any means of sustenance or shelter.”

(f) On September 25, 2006, Congress reaffirmed that “the genocide unfolding in the Darfur region of Sudan is characterized by acts of terrorism and atrocities directed against civilians, including mass murder, rape, and sexual violence committed by the Janjaweed and associated militias with the complicity and support of the National Congress Party-led faction of the Government of Sudan.”

(g) On September 26, 2006, the U.S. House of Representatives stated that “an estimated 300,000 to 400,000 people have been killed by the Government of Sudan and its Janjaweed allies since the [Darfur] crisis began in 2003, more than 2,000,000 people have been displaced from their homes, and more than 250,000 people from Darfur remain in refugee camps in Chad.”

(h) The Darfur crisis represents the first time the United States Government has labeled ongoing atrocities a genocide.

(i) The Federal Government has imposed sanctions against the Government of Sudan since 1997. These sanctions are monitored through the U.S. Treasury Department’s Office of Foreign Assets Control (OFAC).

(j) According to a former chair of the U.S. Securities and Exchange Commission, “the fact that a foreign company is doing material business with a country, government, or entity on OFAC’s sanctions list is, in the SEC staff’s view, substantially likely to be significant to a reasonable investor’s decision about whether to invest in that company.”

(k) Since 1993, the U.S. Secretary of State has determined that Sudan is a country the government of which has repeatedly provided support for acts of international terrorism,

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thereby restricting United States assistance, defense exports and sales, and financial and other transactions with the Government of Sudan.

(l) A 2006 U.S. House of Representatives report states that "a company's association with sponsors of terrorism and human rights abuses, no matter how large or small, can have a materially adverse result on a public company's operations, financial condition, earnings, and stock prices, all of which can negatively affect the value of an investment."

(m) In response to the financial risk posed by investments in companies doing business with a terrorist-sponsoring state, the Securities and Exchange Commission established its Office of Global Security Risk to provide for enhanced disclosure of material information regarding such companies.

(n) The current Sudan divestment movement encompasses nearly 100 universities, cities, states, and private pension plans.

(o) On December 31st, 2007, President George W. Bush signed the Sudan Accountability and Divestment Act (S.2271). The legislation passed the Senate and House unanimously. The law authorizes state and local governments to adopt targeted Sudan divestment policies and prohibits federal contracts with problematic companies that operate in the Sudan's oil, power, mineral and military sectors.

(p) Companies facing such widespread divestment present further material risk to remaining investors.

(q) It is a fundamental responsibility of the [State of X] to decide where, how, and by whom financial resources in its control should be invested, taking into account numerous pertinent factors.

(r) It is the prerogative and desire of the [State of X], in respect to investment resources in its control and to the extent reasonable, with due consideration for, among other things,

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return on investment, on behalf of itself and its investment beneficiaries, not to participate in an ownership or capital-providing capacity with entities that provide significant practical support for genocide, including certain non-United States companies presently doing business in Sudan.

(s) It is the judgment of the [State Legislature] that this Act should remain in effect only insofar as it continues to be consistent with, and does not unduly interfere with, the foreign policy of the United States as determined by the Federal Government.

(t) It is the judgment of this [State Legislature] that mandatory divestment of public funds from certain companies is a measure that should be employed sparingly and judiciously. A Congressional and Presidential declaration of genocide satisfies this high threshold.

Section 2: Definitions

As used in this Act, the following definitions shall apply:

(a) "Active Business Operations" means all Business Operations that are not Inactive Business Operations.

(b) "Business Operations" means engaging in commerce in any form in Sudan, including by acquiring, developing, maintaining, owning, selling, possessing, leasing, or operating equipment, facilities, personnel, products, services, personal property, real property, or any other apparatus of business or commerce.

(c) "Company" means any sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, limited liability company, or other entity or business association, including all wholly-owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates of such entities or business associations, that exists for profit-making purposes.

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- (d) "Complicit" means taking actions during any preceding twenty (20) month period which have directly supported or promoted the genocidal campaign in Darfur, including, but not limited to, preventing Darfur's victimized population from communicating with each other, encouraging Sudanese citizens to speak out against an internationally approved security force for Darfur, actively working to deny, cover up, or alter the record on human rights abuses in Darfur, or other similar actions.
- (e) "Direct Holdings" in a Company means all securities of that Company held directly by the Public Fund or in an account or fund in which the Public Fund owns all shares or interests.
- (f) "Government of Sudan" means the government in Khartoum, Sudan, which is led by the National Congress Party (formerly known as the National Islamic Front) or any successor government formed on or after October 13, 2006 (including the coalition National Unity Government agreed upon in the Comprehensive Peace Agreement for Sudan) and does not include the regional government of southern Sudan.
- (g) "Inactive Business Operations" means the mere continued holding or renewal of rights to property previously operated for the purpose of generating revenues but not presently deployed for such purpose.
- (h) "Indirect Holdings" in a Company means all securities of that Company held in an account or fund, such as a mutual fund, managed by one or more persons not employed by the Public Fund, in which the Public Fund owns shares or interests together with other investors not subject to the provisions of this Act.
- (i) "Marginalized Populations Of Sudan" include, but are not limited to, the portion of the population in the Darfur region that has been genocidally victimized; the portion of the population of southern Sudan victimized by Sudan's North-South civil war; the Beja, Rashidiya, and other similarly underserved groups of eastern Sudan; the Nubian and other similarly underserved groups in Sudan's Abyei, Southern Blue Nile, and Nuba

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Mountain regions; and the Amri, Hamadab, Manasir, and other similarly underserved groups of northern Sudan.

(j) "Military Equipment" means weapons, arms, military supplies, and equipment that readily may be used for military purposes, including, but not limited to, radar systems or military-grade transport vehicles; or supplies or services sold or provided directly or indirectly to any force actively participating in armed conflict in Sudan.

(k) "Mineral Extraction Activities" include exploring, extracting, processing, transporting, or wholesale selling or trading of elemental minerals or associated metal alloys or oxides (ore), including gold, copper, chromium, chromite, diamonds, iron, iron ore, silver, tungsten, uranium, and zinc, as well as facilitating such activities, including by providing supplies or services in support of such activities.

(l) "Oil-Related Activities" include, but are not limited to, owning rights to oil blocks; exporting, extracting, producing, refining, processing, exploring for, transporting, selling, or trading of oil; constructing, maintaining, or operating a pipeline, refinery, or other oil-field infrastructure; and facilitating such activities, including by providing supplies or services in support of such activities, provided that the mere retail sale of gasoline and related consumer products shall not be considered Oil-Related Activities.

(m) "Power Production Activities" means any Business Operation that involves a project commissioned by the National Electricity Corporation (NEC) of Sudan or other similar Government of Sudan entity whose purpose is to facilitate power generation and delivery, including, but not limited to, establishing power-generating plants or hydroelectric dams, selling or installing components for the project, providing service contracts related to the installation or maintenance of the project, as well as facilitating such activities, including by providing supplies or services in support of such activities.

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(n) "Public Fund" means [the state's pension fund systems and other affected assets] or the [trustees and other appropriate designates] in charge of [the state's pension fund systems and other assets targeted by this bill].

[Important Drafting Note: It is critical in this definition to specify precisely which of the many funds/assets managed by the state will be targeted (or, more generally, which TYPES of funds/assets are to be targeted) and then specify exactly who the appropriate manager of such funds/assets are. It may be the case that not all funds/assets under management by a trustee are appropriate for targeting and this needs to be specified here in the definition of Public Fund.]

(o) "Scrutinized" Company means any Company that meets the criteria in paragraph (1), paragraph (2), or paragraph (3) below:

(1) The Company has Business Operations that involve contracts with and/or provision of supplies or services to (A) the Government of Sudan, (B) Companies in which the Government of Sudan has any direct or indirect equity share, (C) Government of Sudan-commissioned consortiums or projects, or (D) Companies involved in Government of Sudan-commissioned consortiums or projects; and

(i) More than ten percent (10%) of the Company's revenues or assets linked to Sudan involve Oil-Related Activities or Mineral Extraction Activities; less than seventy-five percent (75%) of the Company's revenues or assets linked to Sudan involve contracts with and/or provision of Oil-Related or Mineral Extracting products or services to the regional government of southern Sudan or a project or consortium created exclusively by that regional government; and the Company has failed to take Substantial Action; or

(ii) More than ten percent (10%) of the Company's revenues or assets linked to Sudan involve Power Production Activities; less than seventy-five percent (75%) of the Company's Power Production Activities include

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projects whose intent is to provide power or electricity to the Marginalized Populations Of Sudan; and the Company has failed to take Substantial Action.

(2) The Company is Complicit in the Darfur genocide.

(3) The Company supplies Military Equipment within Sudan, unless it clearly shows that the Military Equipment cannot be used to facilitate offensive military actions in Sudan or the Company implements rigorous and verifiable safeguards to prevent use of that equipment by forces actively participating in armed conflict, for example, through post-sale tracking of such equipment by the Company, certification from a reputable and objective third party that such equipment is not being used by a party participating in armed conflict in Sudan, or sale of such equipment solely to the regional government of southern Sudan or any internationally recognized peacekeeping force or humanitarian organization.

Notwithstanding anything herein to the contrary, a Social Development Company which is not Complicit in the Darfur genocide shall not be considered a Scrutinized Company.

(p) "Social Development Company" means a Company whose primary purpose in Sudan is to provide humanitarian goods or services, including medicine or medical equipment, agricultural supplies or infrastructure, educational opportunities, journalism-related activities, information or information materials, spiritual-related activities, services of a purely clerical or reporting nature, food, clothing, or general consumer goods that are unrelated to Oil-Related Activities, Mineral Extraction Activities, or Power Production Activities.

(q) "Substantial Action" means adopting, publicizing, and implementing a formal plan to cease Scrutinized Business Operations within one year and to refrain from any such new Business Operations; undertaking significant humanitarian efforts in conjunction with an international organization, the Government of Sudan, the regional government of

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southern Sudan, or a non-profit entity and evaluated and certified by an independent third party to be substantial in relationship to the company's Sudan Business Operations and of benefit to one or more Marginalized Populations of Sudan; or through engagement with the Government of Sudan, materially improving conditions for the genocidally victimized population in Darfur.

Section 3: Identification of Companies

(a) Within 90 days following passage of this Act, the Public Fund shall make its best efforts to identify all Scrutinized Companies in which the Public Fund has Direct or Indirect Holdings or could possibly have such holdings in the future. Such efforts shall include, as appropriate:

(1) Reviewing and relying, as appropriate in the Public Fund's judgment, on publicly available information regarding Companies with Business Operations in Sudan, including information provided by non-profit organizations, research firms, international organizations, and government entities; and/or

(2) Contacting asset managers contracted by the Public Fund that invest in Companies with Business Operations in Sudan; and/or

(3) Contacting other institutional investors that have divested from and/or engaged with Companies that have Business Operations in Sudan.

(b) By the first meeting of the Public Fund following the 90-day period described in subsection (a), the Public Fund shall assemble all Scrutinized Companies identified into a "Scrutinized Companies List."

(c) The Public Fund shall update the Scrutinized Companies List on a quarterly basis based on evolving information from, among other sources, those listed in subsection (a).

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Section 4: Required Actions

The Public Fund shall adhere to the following procedure for Companies on the Scrutinized Companies List:

(a) Engagement

(1) The Public Fund shall immediately determine the Companies on the Scrutinized Companies List in which the Public Fund owns Direct or Indirect Holdings.

(2) For each Company on the Scrutinized Companies List with only Inactive Business Operations, the Public Fund shall send a written notice informing the Company of this Act and encouraging it to continue to refrain from initiating Active Business Operations in Sudan until it is able to avoid Scrutinized Business Operations. The Public Fund shall continue such correspondence on a semi-annual basis.

(3) For each Company on the Scrutinized Companies List with Active Business Operations, the Public Fund shall send a written notice informing the Company of its Scrutinized Company status and that it may become subject to divestment or prohibition by the Public Fund. The notice shall offer the Company the opportunity to clarify its Sudan-related activities and shall encourage the Company, within 90 days, to either cease its Scrutinized Business Operations or convert such operations to Inactive Business Operations in order to avoid qualifying for divestment or prohibition by the Public Fund.

(4) If, within 90 days following the Public Fund's first engagement with a Company pursuant to paragraph (3), that Company ceases Scrutinized Business Operations, the Company shall be removed from the Scrutinized Companies List and the provisions of this Section shall cease to apply to it unless it resumes

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Scrutinized Business Operations. If, within 90 days following the Public Fund's first engagement, the Company converts its Scrutinized Active Business Operations to Inactive Business Operations, the Company shall be subject to all provisions relating thereto.

(b) Divestment

(1) If, after 90 days following the Public Fund's first engagement with a Company identified in paragraph (a)(1) pursuant to subsection (a)(3), the Company continues to have Scrutinized Active Business Operations, and only while such Company continues to have Scrutinized Active Business Operations, the Public Fund shall sell, redeem, divest, or withdraw all publicly-traded securities of the Company, except as provided below, according to the following schedule:

(i) At least 50% of such assets shall be removed from the Public Fund's assets under management by 9 months after the Company's most recent appearance on the Scrutinized Companies List.

(ii) 100% of such assets shall be removed from the Public Fund's assets under management within 15 months after the Company's most recent appearance on the Scrutinized Companies List.

(2) If a Company that ceased Scrutinized Active Business Operations following engagement pursuant to subsection (a)(3) resumes such operations, paragraph (1) shall immediately apply, and the Public Fund shall send a written notice to the Company. The Company shall also be immediately reintroduced onto the Scrutinized Companies List.

(c) Prohibition

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At no time shall the Public Fund acquire securities of Companies on the Scrutinized Companies List that have Active Business Operations, except as provided below.

(d) Exemption

No Company which the United States Government affirmatively declares to be excluded from its present or any future federal sanctions regime relating to Sudan shall be subject to divestment or investment prohibition pursuant to subsections (b) and (c).

(e) Excluded Securities

Notwithstanding anything herein to the contrary, subsections (b) and (c) shall not apply to Indirect Holdings in actively managed investment funds. The Public Fund shall, however, submit letters to the managers of such investment funds containing Companies with Scrutinized Active Business Operations requesting that they consider removing such Companies from the fund or create a similar actively managed fund with Indirect Holdings devoid of such Companies. If the manager creates a similar fund, the Public Fund shall replace all applicable investments with investments in the similar fund in an expedited timeframe consistent with prudent investing standards. For the purposes of this Section, "private equity" funds shall be deemed to be actively managed investment funds.

Section 5: Reporting

(a) Within 30 days of the passage of this Act, the Public Fund shall file a written report to the United States Attorney General detailing the requirements contained in this Act.

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(b) The Public Fund shall file a publicly-available report to the [State Legislature and Attorney General] that includes the Scrutinized Companies List within 30 days after the list is created.

(c) Annually thereafter, the Public Fund shall file a publicly-available report to the [State Legislature and Attorney General] and send copies of that report to the United States Attorney General and the United States Presidential Envoy to Sudan (or an appropriate designee or successor) that includes:

(1) A summary of correspondence with Companies engaged by the Public Fund under Sections 4(a)(2) and (a)(3);

(2) All investments sold, redeemed, divested, or withdrawn in compliance with Section 4(b);

(3) All prohibited investments under Section 4(c); and

(4) Any progress made under Section 4(e).

Section 6: Provisions for Expiration of Act

This Act shall expire upon the occurrence of any of the following:

(a) The Congress or President of the United States declares that the Darfur genocide has been halted for at least 12 months; or

(b) The United States revokes all sanctions imposed against the Government of Sudan; or

(c) The Congress or President of the United States declares that the Government of Sudan has honored its commitments to cease attacks on civilians, demobilize and demilitarize the Janjaweed and associated militias, grant free and unfettered access for deliveries of

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humanitarian assistance, and allow for the safe and voluntary return of refugees and internally displaced persons; or

(d) The Congress or President of the United States, through legislation or executive order, declares that mandatory divestment of the type provided for in this Act interferes with the conduct of United States foreign policy.

Section 7: Other Legal Obligations

With respect to actions taken in compliance with this Act, including all good faith determinations regarding Companies as required by this Act, the Public Fund shall be exempt from any conflicting statutory or common law obligations, including any such obligations in respect to choice of asset managers, investment funds, or investments for the Public Fund's securities portfolios.

Section 8: Reinvestment in Certain Companies with Scrutinized Active Business Operations

Notwithstanding anything herein to the contrary, the Public Fund shall be permitted to cease divesting from certain Scrutinized Companies pursuant to Section 4(b) and/or reinvest in certain Scrutinized Companies from which it divested pursuant to Section 4(b) if clear and convincing evidence shows that the value for all assets under management by the Public Fund becomes equal to or less than 99.50% (50 basis points) of the hypothetical value of all assets under management by the Public Fund assuming no divestment for any company had occurred under Section 4(b). Cessation of divestment, reinvestment, and/or any subsequent ongoing investment authorized by this section shall be strictly limited to the minimum steps necessary to avoid the contingency set forth in the preceding sentence. For any cessation of divestment, reinvestment, and/or subsequent ongoing investment authorized by this section, the Public Fund shall provide a written report to the [State Legislature and Attorney General] in advance of initial reinvestment, updated semi-annually thereafter as applicable, setting forth the reasons and justification,

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supported by clear and convincing evidence, for its decisions to cease divestment, reinvest, and/or remain invested in Companies with Scrutinized Active Business Operations. This section has no application to reinvestment in Companies on the ground that they have ceased to have Scrutinized Active Business Operations.

Section 9: Enforcement

The Attorney General is charged with enforcing the provisions of this Act and, through any lawful designee, may bring such actions in court as are necessary to do so.

Section 10: Severability

If any one or more provision, section, subsection, sentence, clause, phrase, or word of this legislation or the application thereof to any person or circumstance is found to be invalid, illegal, unenforceable or unconstitutional, the same is hereby declared to be severable and the balance of this legislation shall remain effective and functional notwithstanding such invalidity, illegality, unenforceability or unconstitutionality. The [State Legislature] hereby declares that it would have passed this legislation, and each provision, section, subsection, sentence, clause, phrase or word thereof, irrespective of the fact that any one or more provision, section, subsection, sentence, clause, phrase, or word be declared invalid, illegal, unenforceable or unconstitutional, including, but not limited to, each of the engagement, divestment, and prohibition provisions of this legislation.

Attachment D

"Should Public Plans Engage in Social Investing?"

Alicia Munnell, Center for Retirement Research at Boston College, August 2007

SHOULD PUBLIC PLANS ENGAGE IN SOCIAL INVESTING?

BY ALICIA H. MUNNELL*

Introduction

Social investing is a movement that advocates incorporating social and environmental considerations, as well as financial factors, when making investment decisions. The most recent incarnation of this movement is the initiative by state legislatures to force public pension funds to sell their holdings of companies doing business in Sudan. The effort to divest Sudan-linked stocks began in 2004 after the U.S. government characterized the killing and displacement in Darfur province as genocide.¹ Riding on the coattails of the success of the Sudan effort, state legislatures have now targeted Iran, with a goal of "terror-free" investing. The emotional appeal of such actions is powerful. Over 2 million civilians have been displaced and more than 200,000 slaughtered in Darfur since 2003.² And Iran refuses to back away from its pursuit of nuclear weapons.³ But strong arguments also exist against using public pension plans to accomplish foreign policy goals.

This *brief* explores the current world of social investing, the recent efforts regarding the Sudan and Iran, the likely impact of social investing on the target firms, and the reasons why such activity may be inappropriate for public pension plans.

What Is Social Investing? How Much? Who's Doing It?

Social investing takes three primary forms: 1) screening (either excluding "bad" companies or including "good" companies); 2) shareholder advocacy; and 3) community investing. The Social Investment Forum (SIF), a trade group of social investors, reports that at the end of 2005, in terms of assets under management, screening is by far the most prevalent approach (see Figure 1). Significantly less is involved in shareholder advocacy, and community investing activity is tiny.

FIGURE 1. SOCIAL INVESTING IN THE UNITED STATES BY TYPE OF STRATEGY, 2005



Source: Social Investment Forum (2006).

* Alicia H. Munnell is the Director of the Center for Retirement Research at Boston College (CRR) and the Peter F. Drucker Professor of Management Sciences at Boston College's Carroll School of Management. Jerilyn Libby served as the major research assistant on this project; Dan Muldoon also provided able assistance. John Langbein and Alan Marcus provided valuable comments.

TABLE 1. ASSETS IN SOCIALLY SCREENED PORTFOLIOS, 1999-2005 (BILLIONS)

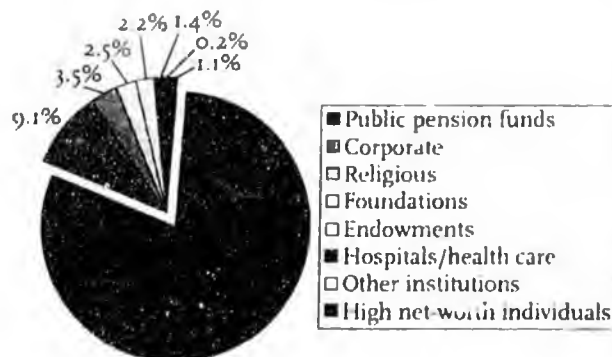
Year	Mutual funds	Separate accounts	Total
1995	\$12	\$150	\$162
1997	96	433	529
1999	154	1,343	1,497
2001	140	1,870	2,010
2003	151	1,992	2,143
2005	179	1,506	1,685

Source: Center for Retirement Research at Boston College (2006).

The Social Investment Forum reports that as of the end of 2005, mutual funds with social screens held \$179 billion and that socially screened "separate accounts," which are managed for individuals and institutional clients, held \$1,506 billion (see Table 1). The SIF calculates that these totals amount to 9.4 percent of all public and private assets under management.

The bulk of the money in separate accounts (80 percent) is the assets of public pension funds (see Figure 2). And screening is pervasive among public funds. The SIF numbers suggest that, in 2005, \$1.2 trillion of public pension fund assets were screened by some criteria. These screened assets accounted for 45 percent of total state and local pension holdings in that year.³

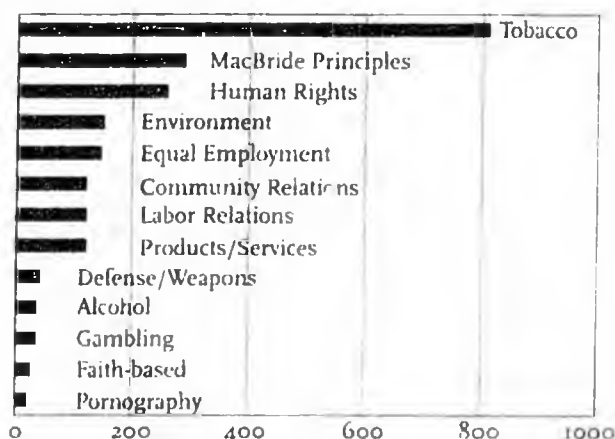
FIGURE 2. SOCIALLY SCREENED INVESTOR ASSETS, 2005



Source: Social Investment Forum (2006).

The screens vary by the nature of the customer. As of 2005, by far the most popular approach for mutual funds was a negative screen for tobacco; alcohol came in second; gambling third.⁵ But the pattern for institutional separate accounts, which is dominated by public plans, is quite different. For these accounts, the MacBride Principles (relating to fair hiring in Northern Ireland), Human Rights, the Environment, and Equal Employment Opportunity ranked among the top social concerns (see Figure 3).

FIGURE 3. SOCIAL SCREENING BY INSTITUTIONAL INVESTORS, 2005 (BILLIONS)



Source: Social Investment Forum (2006).

Note that almost none of the screened money is held in private sector defined benefit pension funds.⁶ These private plans are covered by the Employee Retirement Income Security Act (ERISA), and right from the beginning the Department of Labor has stringently enforced ERISA's duties of loyalty and prudence.⁷ In 1980, the chief administrator of the Department of Labor's pension section published an influential article that warned that the exclusion of investment options would be very hard to defend under ERISA's prudence and loyalty tests.⁸ And a 1994 Interpretive Bulletin reminded fiduciaries that they are prohibited from subordinating the interests of participants and beneficiaries ... to unrelated objectives.⁹ Thus, ERISA fiduciary law has effectively constrained social investing in private sector defined benefit plans.¹⁰ Social investing is a public pension fund phenomenon.

Recent Developments – Sudan and Now Iran

During 2005, and therefore not reflected in Figure 3, state legislatures in Arizona, Illinois, Louisiana, New Jersey, and Oregon passed legislation related to companies with operations in Sudan.¹¹ Since then some states have branched out to include Iran. And Missouri has taken the lead in initiating an entirely “terror-free” investment policy. American companies have been barred for some time from doing business in either Sudan or with states considered sponsors of terrorism according to the U.S. State Department (Cuba, Iran, North Korea, Sudan and Syria).¹² But in a world of global investing, U.S. investors can have a link to Sudan or “terror states” through foreign stock holdings. Such foreign holdings would be most affected by the recent state legislation.

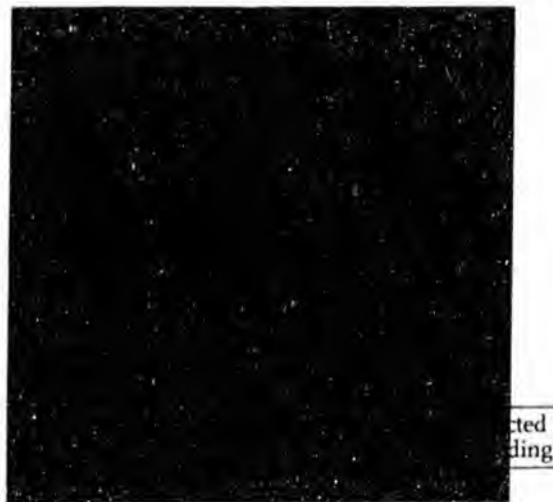
Sudan

As of August 2007, eighteen states have passed laws regarding divestment of state pension and other funds from Sudan (see Figure 4).¹³ Divesting is not easy, however. State and local pension funds tend to invest in global indices, so the exercise involves identifying the companies with links to Sudan and then constructing a Sudan-free index that mimics established benchmarks.

Generally, the states have asked their money managers to figure out which stocks have a Sudan link. Money managers, in turn, have left it to the social investing firms, such as KLD Research and Analytics, Institutional Shareholders Services, and the Conflict Securities Advisory Group to identify companies involved in Sudan. KLD originally said that 124 companies were on its Sudan list, including eight American companies.¹⁴ The social investing firms refuse to make the names public, however, since that is how they earn their money.¹⁵ And apparently, the lists are not definitive. Some companies appeared on the original KLD list even though they were not actually doing business in Sudan. And for at least one, 3M, its involvement was the result of a U.N. purchase of Scotchshield Ultra Safety and Security Film to protect embassy and mission windows from explosions, a transaction that was authorized by the federal government.¹⁶

The Sudan Divestment Task Force (2007) publishes a more tightly targeted list, recommending the divestment of only 28 companies. These are compa-

FIGURE 4. STATES THAT HAVE ENACTED OR ARE CONSIDERING SUDAN DIVESTMENT LEGISLATION, 2007



Sources: National Conference of State Legislatures (2007); Office of Missouri State Treasurer (2005); Sudan Divestment Task Force (2007); State of Arizona (2005), State of Arkansas (2007); and State of Louisiana (2005 and 2007).

nies that 1) do business with the Sudanese government; 2) provide little benefit to the disadvantaged of Sudan; and 3) have not developed policies to prevent their business activities from inadvertently contributing to the government's genocide capability.

Fund managers take the Sudan-link list and attempt to construct “Sudan Free” funds that mimic popular benchmarks. This step is also a challenge. According to the chief investment strategist at Northern Trust, whose fund tracks the Morgan Stanley Capital International Europe Australasia Far East index (MSCI EAFE) index, constructing a “Sudan-free” index will require divesting 25 companies or 9 percent of assets.¹⁷

Despite the challenges involved, public funds have moved \$2.2 billion away from Sudan-linked companies between 2005 and 2007.¹⁸

Iran

More recently, “terror-free” investment has been picking up steam. The primary targets are companies doing business in Iran.¹⁹ As noted above, U.S. companies have long been barred from operating in Iran, but more than 200 multinationals have investments there, from Royal Dutch Shell and France's telecommunications-equipment company Alcatel to Sweden's electronics company Ericsson.²⁰

On June 8, 2007, Florida's governor signed a Sudan and Iran Divestiture bill into law. Florida follows other states with regard to Sudan, but is the first to enact divestiture legislation for companies doing business with Iran.²¹ Louisiana, which had passed "terror-free investing" legislation in 2005, permits — but does not require — divestment. Arizona, which also passed legislation in 2005, only requires the public retirement system to disclose investments in terror-linked companies. In Illinois, the state Senate passed an Iran divestment bill on June 14, 2007 which would compel the state's five retirement systems to divest Iran-connected companies in energy and other natural resources.²² California, Georgia, Kansas, Michigan, Missouri, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, and Texas are also considering adopting Iran-free investing (see Figure 5).²³

If some of the bills are passed in their broadest form, institutions may be forced to sell \$18 billion

FIGURE 5. STATES THAT HAVE ENACTED OR ARE CONSIDERING IRAN DIVESTMENT LEGISLATION, 2007



Sources: National Conference of State Legislatures (2007); Office of Missouri State Treasurer (2005); State of Arizona (2005), and State of Louisiana (2005 and 2007).

in investments.²⁴ Selling all Iran-related securities would add substantial risk to an indexed international equity portfolio. State Street Global Advisors (SSgA), Boston, has had preliminary conversations with clients about Iran divestments. SSgA estimates that if all companies with ties to Iran were removed from Morgan Stanley's EAFE index and replaced with similar performing companies, it would introduce a tracking error of up to 200 basis points, compared to the tracking error on a typical index of between five and 10 basis points.²⁵

Some state legislatures, however, are limiting the scope of divestiture to energy-related stocks, arguing that such action is likely to be most effective in curbing terrorist activities. Narrowing the scope greatly reduces the number of stocks and amount that would have to be sold.²⁶

Iran is a more politically complicated issue than Sudan. Sometimes promoters of "divest Iran" suggest that the effort is aimed at Al Qaeda.²⁷ But Al Qaeda is an enemy without a state and therefore difficult to target. In addition, the U.S. government is not enthusiastic about the effort, because it is working on its own initiative with allies to curtail business transactions tied to nuclear activities and support for terrorism. Treasury and State Department officials have expressed concern that broad-based divestiture could cause a backlash if allies feel that a wide range of companies is under attack.²⁸

Despite the complexities involved with Iran, some states have gone even further and are pursuing "terror-free" investing, which extends the scope of the boycott to all the countries on the U.S. State Department's State Sponsors of Terrorism list, which includes Cuba, Syria, and North Korea. Missouri has been at the forefront of this movement. The State Treasurer claims that at least 500 big foreign companies and multinationals do at least some business in countries identified as sponsoring terrorism.²⁹ The Treasurer's goal is to have all Missouri's investments "terror-free," although the state legislature has not yet passed divestiture legislation for the state pension funds.³⁰ Anti-terrorism bills have been enacted in Arizona, Florida, and Louisiana.

Given the substantial amount of social investing by public pension funds, it is useful to consider the likely impact of such activity on the targets of the social screen and the likely impact on the pension funds themselves.

The Economics of Social Investing

The academic literature suggests that social screens are likely to have very little impact on the target company and that the impact on the pension fund depends on the scale of the screen.

Impact on Targeted Company

The SIF Report suggests that social investing will have a financial impact — that investors are putting their money to work in ways that will build “a better, more just, and sustainable economy.” The academic literature on the stock market, however, suggests the opposite. And a comprehensive survey on the effect of the South African boycott — the largest and most visible social action — documents virtually no effect, suggesting the real world mirrors the textbook model.

According to standard finance theory, the price of any stock equals the present discounted value of expected future cash flows. Thus, the stock of a particular firm has a lot of close substitutes, which makes the demand curve for a particular stock, in economists’ terms, almost perfectly elastic.³¹ That is, even a big change in quantity demanded will lead to only a small change in price. And any significant deviation from the fundamental price would represent a profitable trading opportunity that market participants would quickly exploit and thus correct.³² In other words, boycotting tobacco stocks or international companies doing business in Sudan or Iran may result in a temporary fall in the stock price, but as long as some buyers remain they can swoop in, purchase the stock, and make money. And the buyers are out there. The “Vice Fund,” which was established in September 2002, specializes in only four sectors — alcohol, tobacco, arms, and gambling, and thus stands ready to buy the stocks screened out of standard portfolios.³³ Thus, the textbooks suggest that boycotting tobacco companies or international companies doing business in Iran is unlikely to have any impact on the price of their stocks.

A 1999 study took a comprehensive look at how equity prices responded to sanctions and pressures for firms to divest their holdings in South Africa.³⁴ The conclusion that emerges from a series of event studies is that the anti-apartheid shareholder and legislative boycotts had no negative effect on the valu-

ation of banks or corporations with South African operations or on the South African financial markets. This is not to say that the boycott was not important politically, but merely that it did not impact financial markets. The study looks at pressure put on firms from both congressional action and divestiture by pension funds and universities.

The bulk of the congressional action occurred in 1985 and 1986, when the U.S. government passed legislation imposing trade embargoes, currency sanctions, and lending restrictions. Most importantly, the Comprehensive Anti-Apartheid Act of 1986 prohibited new private or public loans to South Africa other than for humanitarian purposes. To test the impact of this prohibition, the study identified ten important legislative events leading up to the 1986 Act and examined their impact on a portfolio of nine banks with South African loans. The results showed few sig-

Injecting politics into pension policy is problematic.

nificant effects on bank stock prices and where significant they were of the wrong sign.

Pension funds and universities also put pressure on corporations. Pension fund involvement in the South African issue began when a number of churches threatened to divest from banks doing business in South Africa. In 1977, the first iteration of the “Sullivan principles,” which called for non-segregation of races and equal pay for equal work, was adopted in the hope that by adhering to these principles, companies could continue doing business in South Africa and at the same time promote non-discrimination policies.³⁵ But many felt that the Sullivan principles did not go far enough, so Reverend Sullivan called in 1987 for companies to withdraw completely from South Africa. Many funds began to divest themselves even of companies that had followed these principles.³⁶ The study looked at the effect of 16 pension fund divestments on a portfolio of firms with the highest exposure in South Africa. The results showed no evidence that the pension fund divestment announcements hurt firms with major South African operations.

In short, financial textbooks characterize the demand curves for individual stock as infinitely elastic, so the price of the stock of a targeted company is unlikely to be affected by a boycott so long as additional buyers remain to scoop up the profit opportunity. The fact that an effort as large as the boycott of firms doing business in South Africa had virtually no effect on stock prices suggests that the financial effect of social investing on target firms is roughly zero.

Impact on the Pension Fund

But does social investing affect the pension fund adversely? Modern portfolio theory states that investors should diversify their asset holdings over a variety of securities, so that the returns on all financial assets do not move in lockstep.³⁷ The question is how many securities are needed for the portfolio to be efficient? The answer is that an investor needs only 20-30 stocks to construct a fully diversified portfolio.³⁸ The small number of required stocks suggests that eliminating, say, tobacco, which accounts for about 1 percent of the market capitalization of the S&P 500, should leave enough securities to construct something very, very close to the market index. As the number excluded increases, it would become increasingly difficult to duplicate the market.³⁹

In terms of evidence, considerable research has compared the risk-adjusted return of screened portfolios to the return of unscreened portfolios. Most of the studies cover the period since the mid-1980s. Overall, the results show that the differences in risk-adjusted returns between the screened portfolios and unscreened portfolios are negligible and in most cases zero.⁴⁰ A few studies have focused on the effects of divestiture of tobacco stocks in the 1990s and show that the risk and returns for the S&P 500 with and without tobacco stocks were almost identical.⁴¹

In addition to comparing the performance of screened portfolios to the S&P 500, several studies have examined the performance of social investment funds relative to the S&P 500. The Domini Social Index includes 400 U.S. companies that pass multiple and broad-based social screens, and the Calvert Social Index is a broad-based index including 659 companies. The majority of these studies show that socially screened funds have no significant effect on risk-adjusted returns.⁴²

In contrast, the evidence from the early days of the South Africa divestiture suggested that screening out stocks meant large losses. For example, in the 1970s, Princeton University reported that the stocks that had been excluded because of South Africa ties outperformed other holdings by 3 percent.⁴³ As time passed and researchers undertook more comprehensive studies, the conclusions shifted. For example, one study examined the performance of a South-Af-

rica free portfolio compared to an unscreened NYSE portfolio for the period 1960-1983 and found that, after adjusting for risk, the portfolio excluding South Africa companies actually performed better than the unscreened portfolio.⁴⁴ The positive results occurred because companies with South Africa ties were large and excluding these companies increased reliance on small-cap stocks, which performed better on a risk-adjusted basis during this period. During the late 1980s, the results were also mixed. On the one hand, a 1998 study analyzed data from the Surveys of State and Local Employees (PENDAT) from the early 1990s and found no significant effect on returns from restrictions on South Africa investments.⁴⁵ On the other hand, the S&P 500 including South Africa stocks performed slightly better than the index without the stocks, and one study of public pension plans found that South Africa restrictions had a negative effect on returns.⁴⁶ Thus, a large divestiture movement could have some negative effect on returns earned by public plans.

State actions may conflict with federal foreign policy.

Another aspect that has received less attention is the administrative costs of social investing. It is possible that social invest-

ment funds associated with higher fees and therefore has lower net returns because additional resources are required by fund managers to do the screening. The 2003 SIF Report concluded that socially responsible funds appear as competitive as other funds when it comes to administrative costs. However, others challenge this view by pointing out that some of the large-cap social index funds have above-average fees.⁴⁷ Moreover, in the case of Sudan and Iran, constructing new indices to match existing benchmarks involves substantial costs.

In short, theoretical models of portfolio choice imply that restricting the portfolio to socially responsible investments could have an effect on the rate of return by limiting the ability to diversify. Given the large number of stocks available, however, the cost — using traditional asset pricing models — is likely to be negligible. The bulk of the studies, which compare risk-adjusted returns for socially screened portfolios to those of unrestricted portfolios, supports this claim. Although a “terror-free” effort as large as the South African divestiture may have had some effect.⁴⁸ And administrative costs may be an important issue.

Public Plans Are Not Suited to Social Investing

In the late 1970s, some observers identified the large and rapidly growing funds in state and local pension plans as a mechanism for achieving socially and politically desirable objectives. The initial debate focused on attempts to exclude from pension portfolios companies with specific characteristics, such as those with almost totally nonunion workforces or investments in South Africa. The focus quickly shifted to undertaking pension investments that would foster social goals such as economic development and home ownership.⁴⁹ Advocates generally contended that the broader goals could be achieved without any loss of return.

Early reports, however, suggested that the targeting did involve sacrificing return. For example, a 1983 study of state-administered pension funds showed that many states had purchased publicly or privately insured mortgage-backed pass-through securities to increase homeownership in their state.⁵⁰ Analysis of the risk/return characteristics of these targeted mortgage investments revealed that 10 states either inadvertently or deliberately had sacrificed as much as 200 basis points to foster homeownership. Similarly, in 1992, Connecticut's state pension fund lost \$25 million attempting to shore up Colt Industries. The firm went bankrupt two years after the fund bought a 47 percent interest in an attempt to protect Connecticut jobs.⁵¹ In Kansas, the state pension fund lost between \$100 and \$200 million on defaulted loans from an in-state investment program that included a chain of video stores, a steel mill, and a failed savings and loan bank.⁵² State and local pension funds were on a naïve and dangerous path.⁵³

The losses in the 1980s and early 1990s were a sharp wake-up call to a number of public pension fund managers who appeared to believe that they could accomplish social goals without sacrificing returns. Over the last 20 years, the rhetoric associated with targeted investments has changed markedly. Public pension fund managers, sensitive to the potential for losses, go out of their way to make clear that they are no longer willing to sacrifice returns for social considerations; almost every definition of social investing includes a requirement that the investment produce a "market rate of return."

In the recent debate regarding Sudan and Iran, trustees of public plans have spoken out opposing such initiatives. Administrators at California's large public pension funds — CalPERS and CalSTERS — oppose the California bills requiring divestiture. A CalPERS spokesman said that determining which companies have dealings with Iran would be a struggle: "We don't necessarily have the resources or the expertise."⁵⁴ Similarly, the executive director of Massachusetts' Pension Reserves Investment Management Board, which invests public plan assets, said "You hire us to make you money, and when you restrict our ability to pick stocks, you likely restrict our ability to get returns."⁵⁵ Ohio's legislature initially considered following the Missouri model making investments "terror-free" by filtering out all stocks with links to North Korea, Syria, Sudan or Iran. The pension fund administrators argued that the measure would affect stocks of more than 170 companies and require the funds to sell more than \$9 billion. Administrative costs would exceed \$60 million.⁵⁶

Moreover, legislative mandates for pension fund investing may have implications elsewhere in the state. For example, in the case of Ohio the "terror-

free" investing bill would have roped in companies such as Honda, DaimlerChrysler AG, Bridgestone Corporation, Siemens,

and Thyssenkrupp AG, all of which had investments in Ohio.⁵⁷ The pension funds estimated these companies employed more than 45,000 workers. In response, the legislature narrowed the scope of the effort and decided to go after only those companies with more than \$20 million in Iran's energy sector.⁵⁸

Most importantly, three aspects of public pension funds make them particularly ill-suited vehicles for social investing.

First, the decision-makers and the stakeholders are not the same people. The decision-makers are either the fund board or the state legislature. The stakeholders are tomorrow's beneficiaries and/or taxpayers. If social investing produces losses either through higher administrative costs or lower returns, tomorrow's taxpayers will have to ante up or future retirees will receive lower benefits. The welfare of these future actors is not well represented in the decision-making process.

Second, whereas the investment practices of many large public funds are first rate, other boards are much less experienced. The boards of smaller

*Divestment can be complicated,
costly, and ineffective.*

funds often consist of between five and eleven people including mayors, treasurers, comptrollers, city councilors, union leaders, and citizens. The process is often conducted behind closed doors and subject to little public scrutiny. Moreover, many state and local plans are still run in-house and involve the selection of individual stocks rather than broad-based indices. A front page *New York Times* article reported that political money sometimes affects pension investment decisions. As a result, pension boards may overlook excessive fees or high rates of turnover, and they may approve inappropriate investments.⁵⁹ Introducing divestment requirements into such an environment is problematic.

The final issue is the slippery slope. This round of divestment began with Sudan and involved only a few stocks. It is quickly spreading to Iran, where the issues are even more complicated and the number of companies substantially greater. If "terror-free" investing gains momentum, what is going to stop the spread to, say, Saudi Arabia, original home of 15 of the 19 hijackers involved in the 9/11 terrorist attacks? At some point, the administrative costs of broad-based divestiture will balloon and excluding large numbers of companies will definitely hurt returns.

Conclusion

Everyone is horrified by genocide, and no one wants to support terror. Yet even those who sell socially responsible funds admit that the issue of divestiture is complex: "You have to ask yourself what your goal is with divestment. What's there if the government falls? Is there a government there that will take over and be better? If the companies that pull out provide money, goods, and services, is there an understanding that will make the people poorer in the short run?"⁶⁰ Yes, the regime changed in South Africa, but many South Africans say that it was the cultural boycott — particularly in sports — rather than the divestiture of companies with South-Africa-linked activities that resulted in the peaceful ascendance of Nelson Mandela as president.⁶¹

In addition to the issue of effectiveness, the fundamental question is where foreign policy should be made. Sudan does not raise as many issues in this regard as Iran. The State Department is working closely with foreign governments to get specific companies to stop selected activities, particularly in Iran's energy sector. Additionally, in more than one instance, federal courts have ruled that state legisla-

tion regarding social investment was unconstitutional on grounds that it overlapped with federal regulations.⁶² Statements by officials at both Treasury and the State Department make clear their concern that a broad-based divestiture could disrupt the government's effort.

But even assuming that divestment is an effective mechanism to stop genocide and reduce terror risk and that state legislatures and pension fund boards are the right place to make foreign policy, the issue remains whether pension funds are an appropriate vehicle for implementing that policy. The answer seems unquestionably "no." The decision-makers are not the people who will bear the brunt of any losses; rather they will accrue to future beneficiaries and/or taxpayers. In many instances, the environment surrounding public pension fund investing is politically charged and encouraging public pension fund trustees to take "their eyes off the prize" of the maximum return for any given level of risk is asking for trouble. And finally, boycotting companies doing business with particular countries is a slippery slope — today Sudan and Iran, tomorrow Saudi Arabia.

Endnotes

- 1 Actually, as early as 2000, many college endowments and public pension funds, including CalPERS, did not participate in the initial public offering of PetroChina, because of its involvement in oil extraction in Sudan. See Fried (2006).
- 2 Amnesty International (2007) and Hagan and Palloni (2006).
- 3 U.S. Department of Treasury (2007).
- 4 The Federal Reserve Flow of Funds reports total assets for state and local pension plans of \$2,701.5 billion in 2005.
- 5 The majority of funds (64 percent) use 5 or more screens; the remainder are divided between those with a single screen (25 percent) and those with 2-4 screens (11 percent).
- 6 Multi-employer plans have made a few efforts to stimulate demand for union labor, especially in the construction trades. And some health care companies and hospitals screen for tobacco. But generally very little social investment has taken place. The Social Investing Forum (SIF), however, has reported that nearly 10 percent, or \$137 billion, of screened assets are in corporate defined benefit plans. It was impossible for the author to ferret out where this money was. The only corporation mentioned by SIF was the Federal Home Loan and Mortgage Corporation (Freddie Mac). Since Freddie Mac invests most of its money in home mortgages, it is not clear how it is involved in social screening. In a personal communication, SIF's Joshua Humphreys said that there are other corporations that are not included on the list, but SIF refused to give out any additional names.
- 7 ERISA requires a fiduciary to act "solely in the interests of the [plan] participants and beneficiaries... for the exclusive purpose" of providing benefits to them. A fiduciary must also act "with the care, skill, prudence, and diligence" of the traditional "prudent man." See Langbein, Stabile, and Wolk (2006).
- 8 Lanoff (1980).
- 9 U.S. Department of Labor (1994).
- 10 Some companies offer their employees one or more mutual fund options that pursue social investing criteria. Such an option does not raise any fiduciary concerns because the decision is left entirely to the participant.
- 11 The New Jersey legislation requires its pension funds to divest holdings in businesses that have equity stakes in the Sudan. A similar bill in Illinois, enacted in June 2005, provides that a fiduciary should not transact any business with a company doing business with Sudan, although in February 2007 the Federal District Court for the Northern District of Illinois ruled this act unconstitutional. Oregon also passed such a law for its public pension funds, while Louisiana legislation permits, but does not require, divestiture of investments linked to the Sudan.
- 12 U.S. Department of State (2007a). In 1997, President Clinton issued an executive order barring companies from conducting business in the Sudan; foreign businesses do not fall under that restriction.
- 13 For example, Texas legislation, signed into law on June 15, 2007, will require both the Teacher Retirement System and the Texas Employees Retirement System to ask affected companies to cease business in Sudan and to divest shares of unresponsive companies. The Hawaiian Employees' Retirement System was required to divest from Sudan-related investments when legislation went into effect July 1st. In Connecticut, legislation enables the Treasurer to divest state funds invested in companies doing business in Sudan or decide against further or future investments. Nineteen other states have pending divestment legislation or are taking other actions towards divestment. For example, the New York State Comptroller adopted a targeted Sudan divestment policy for the New York State Common Retirement Fund.
- 14 Fried (2006).
- 15 A KLD employee told us that KLD sells their compliance list to institutional money managers who are interested in social divestment and that it is not in the company's best interest to allow outside organizations to obtain their list in whole or in part. KLD also would not provide information about the American companies on the list. This information was obtained through a personal communication with KLD's Randy O'Neill.

- 16 Fried (2006). In a personal communication, 3M's Jacqueline Berry also confirmed the sale of the Security Film to the United Nations.
- 17 Fried (2006) and a personal communication with Northern Trust's Priya Khetarpal.
- 18 Pichardo (2007).
- 19 The U.S. House Financial Services Committee on May 23, 2007 passed legislation that would protect public pension funds and their money managers from litigation in response to Iranian divestiture.
- 20 King (2007).
- 21 The new law requires the State's Board of Administration to contact companies with business ties to Sudan and with energy ties in Iran, asking them to stop such activities; unresponsive companies would have to be divested 90 days after the communication. See *Pensions and Investments* (2007a).
- 22 *Pensions and Investments* (2007b).
- 23 The California legislation, which was proposed in January and as of July is still in committee in the state senate, would force two of the nation's largest pension funds — for the state's public employees and teachers, with combined holdings of \$400 billion — to remove their money from any foreign company doing business with Iran. See Abdollah (2007).
- 24 Pichardo (2007).
- 25 See Pichardo (2007); and also confirmed by a personal communication with SSGA's Gary Conway. Also, according to Northern Trust Global Investments, companies doing business in Iran comprise about 25 percent of the MSCI EAFE index, compared to about 15 percent with ties to Sudan.
- 26 When narrowed, the number of companies involved declines from 100-125 to the 19-25 range. In California, for example, CalPERS would have to divest \$8 billion if a bill introduced by Joel Anderson is passed. If narrowed to companies only with energy interests in Iran, the divestiture requirement drops to \$2 billion. See Pichardo (2007).
- 27 LaFranchi (2007).
- 28 See U.S. Department of Treasury (2007); U.S. Department of State (2007b); and McKinley (2007).
- 29 Karmin (2007).
- 30 See Frick (2007).
- 31 For a summary of the literature on testing the extent to which the supply curve is elastic, see Munnell and Sundén (2005).
- 32 The caveat is, of course, that potential buyers must not think the sale (purchase) reflects a negative (positive) assessment of the firm's financial condition or business prospects that could affect future cash flows. If potential purchasers believe that the seller is disposing of the stock because he knows something adverse they do not, they will revise down their assessment of the stock's value, and the transaction will reduce the price of the stock.
- 33 Apparently the Vice Fund has grown at 20 percent annually since its inception, outpacing the S&P's growth of 16 percent. At first blush, these results appear to contradict the conclusion that screening has no impact, but the period under consideration is far too short for these numbers to have meaningful implications. See Authers (2007).
- 34 Teoh, Welch, and Wazzan (1999).
- 35 During the 1970s, as opposition against the apartheid government increased, social activists charged that companies investing in South Africa indirectly supported the government and its discrimination policies. In an initial effort to resolve the conflict, the Reverend Leon Sullivan in 1977 introduced a set of guidelines for companies doing business in South Africa, the so-called "Sullivan Principles." By 1987, 127 U.S. companies had signed on to the Sullivan principles (Auerbach, 1987).
- 36 For example, CalPERS divested itself of \$9.5 billion worth of shares of companies holding a South African subsidiary. Pressure to divest and a worsening economic and political environment in South Africa led many companies (IBM, Exxon, Ford, GM and Chrysler) to sell their holdings. See Teoh, Welch, and Wazzan (1999).
- 37 An asset can be characterized by its expected return and the risk associated with that return, measured by the variance in returns. The risk of a specific asset can be broken down into two parts: risks that are unique to that stock (firm risk) and risks that stem from market-wide variations such as business cycle variation, inflation, and interest rate fluctuations

(market risk). When assets are combined in a portfolio, the return on the overall portfolio is given by the average return of the assets. And the risk associated with the portfolio is determined by the variance of the individual returns and the degree to which the individual returns vary together (covariance). Thus, by combining assets into a portfolio that have differing risk characteristics, an investor can create an efficient portfolio — a portfolio that is expected to achieve a given level of expected returns while minimizing risk.

38 Assume an investor plans to divide his money among n stocks selected from the entire market portfolio. The portfolio variance is given by:

$$\text{Portfolio variance} = 1/n * \text{average variance} + (1-1/n) * \text{average covariance}$$

As the number of securities in the portfolio increases, the contribution to total risk from the individual firm-specific risk decreases and the contribution from how the risks vary in relation to each other (covariance) increases. Thus, as the number of securities increases, the overall portfolio variance approaches the economy-wide risk, represented by the second term in the equation. With 2 stocks in the portfolio, half of the overall variance is due to firm specific risk and half to market risk. By the time a portfolio contains 10 securities, 90 percent of the portfolio's variance should be determined by the market risk. With a 20 stock portfolio, 95 percent of the variance should be determined by the overall market risk. See Brearley and Myers (1988).

39 Rudd (1981) and Grossman and Sharpe (1986) argue that the investor will not be able to exactly duplicate the market portfolio, because the screened portfolio will have relatively greater covariation in returns. Rudd also argued that social investing will introduce size and other biases into the portfolio, which will lead to a deterioration in long-run performance.

40 Guerard (1997); Hamilton, Jo, and Statman (1993); Statman (2000); Bauer, Koedijk, and Otten (2002); Dhrymes (1998); and Bello (2005). A similar result has been found for bond portfolios (D'Astous, Johnsen and Hutton, 1997).

41 DiBartolomeo (2000). In the late 1980s and early 1990s, tobacco stocks performed slightly better than the S&P 500 but during the second half of the 1990s the tobacco stocks underperformed the S&P 500 on a risk-adjusted basis (Social Investment Forum, 1999;

and Ferrari, 2000). However, the overall effect of divesting tobacco stocks should be small because they only account for about 1 percent of the S&P 500.

42 Kurtz and DiBartolomeo (1996); DiBartolomeo and Kurtz (1999); DiBartolomeo (1996); and Bello (2005). Some critics of these results contend that the comparable returns reflect the fact that the screened funds invest a higher proportion of their assets in small cap stocks. Small caps have out-performed large caps over the period 1995 to 2007 by more than 3 percentage points (10.9 percent versus 7.8 percent). The discrepancy since the trough in the market in 2002 has been even greater (20.0 percent versus 11.0 percent). Bello (2005) contends, however, that the sizes of the companies in the screened and unscreened portfolios are very similar.

43 Malkiel (1991).

44 Grossman and Sharpe (1986).

45 Munnell and Sundén (2001).

46 Romano (1993).

47 Hickey (2000).

48 A recent study (Karolyi, 2007) of terror-free investing concluded that there were no significant differences in risk or return of stock portfolios screened on the basis of their operations in countries designated as state sponsors of terrorism and the S&P 500. This study, however, focused exclusively on U.S. markets, where very few firms do business in terror-linked countries. The author notes that "Broadening the analysis to incorporate a global investment strategy may render different results and conclusions."

49 Two books were instrumental to broadening the social investing debate — Rifkin and Barber (1978) and Litvak (1981).

50 Munnell (1983).

51 Schwimmer (1992); and Langbein, Stabile, and Wolk (2006).

52 White (1991).

53 In their initial forays into economically targeted investments, public pension fund managers generally

did not appear to recognize the "Catch-22" nature of the exercise. For the most part, the goals of increasing in-state housing investment and maximizing returns are inconsistent in the United States' highly developed capital markets. Any housing investment that offers a competitive return at an appropriate level of risk, such as a GNMA, does not need special consideration by public pension plans nor would such consideration increase the long-run supply of mortgage loans. Investments by pension funds that would increase the supply of housing funds must by definition either produce lower returns or involve greater risk. Sophisticated advocates of targeted investments recognized the efficiency of the market for housing finance and argued that pension funds could make a contribution through innovative forms of housing finance. But that was not what was going on in 1983; the in-state mortgages purchased by public pension funds tended to be conventional fixed-rate 30-year mortgages. See Munnell (1983).

54 McKinley (2007) and also confirmed by a personal communication with CalPERS' Brad Pacheco.

55 Mishra (2006).

56 King (2007).

57 Ohio Retirement Study Council (2007).

58 King (2007).

59 Walsh (2004).

60 The comment is from Julie Forte, director of social research at Calvert Investments (Fried, 2006).

61 Authers (2007).

62 Stern (2007).

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**CENTER FOR
RETIREMENT
RESEARCH
AT BOSTON COLLEGE**

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The research reported herein was supported by the Center's Partnership Program. The findings and conclusions expressed are solely those of the author and do not represent the views or policy of the partners or the Center for Retirement Research at Boston College.

FISCAL NOTE

STATE OF ALASKA
2008 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HB 287
 () Publish Date: 1/15/2008

Identifier (file name): HB287-REV-APFC-01-29-08 Dept. Affected: Revenue
 Title: Divest Investments in Sudan RDU: Alaska Permanent Fund Corp
 Component: Alaska Permanent Fund Corp
 Sponsor: Representative Lynn
 Requester: House State Affairs Committee Component Number: 109

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
OPERATING EXPENDITURES							
Personal Services	33.8		11.6	11.6	11.6	11.6	11.6
Travel	4.8						
Contractual	10,843.0		6,807.0	7,273.0	7,771.2	8,304.0	8,873.5
Supplies							
Equipment							
Land & Structures							
Grants & Claims							
Miscellaneous							
TOTAL OPERATING	10,881.6	0.0	6,818.6	7,284.6	7,782.8	8,315.6	8,885.1

CAPITAL EXPENDITURES							
-----------------------------	--	--	--	--	--	--	--

CHANGE IN REVENUES ()							
-------------------------------	--	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF							
1005 GF/Program Receipts							
1037 GF/Mental Health							
1105 APFC Receipts	10,881.6	0.0	6,818.6	7,284.6	7,782.8	8,315.6	8,885.1
TOTAL	10,881.6	0.0	6,818.6	7,284.6	7,782.8	8,315.6	8,885.1

Estimate of any current year (FY2008) cost: _____

POSITIONS

Full-time							
Part-time	1.0		1	1	1	1	1
Temporary							

ANALYSIS: (Attach a separate page if necessary)

HB 287 would require that the Alaska Permanent Fund Corporation develop a list of companies doing business in Sudan that support the Sudanese government, excluding humanitarian efforts and other activities listed in the legislation. Once identified, APFC would write to the companies in question to ask them to cease operations in Sudan. If they do not cease operations, APFC would divest these holdings from the Alaska Permanent Fund's portfolios over 15 months. APFC estimates that it will take a part-time Equities Analyst to perform the initial analysis, undertake the engagement with the listed companies and notify APFC external managers to divest of any holdings if necessary. Estimated costs include purchasing external contractors' information on companies doing business in Sudan, increased manager fees due to mandate customization, and costs necessary to search for new managers when mandates can not be customized.

Prepared by: Michael J. Burns, Chief Executive Officer
 Division: Alaska Permanent Fund Corporation
 Approved by: _____

Phone: 907-796-1520
 Date/Time: 1/29/08 12:00 AM
 Date: _____



Alaska Permanent Fund Corporation

Analysis of HB 287 Divest Investments in
Sudan

Estimated first year costs of implementing a divestiture plan	\$10.9 - \$14.6 million
--	--------------------------------

Estimated ongoing costs of implementing a divestiture plan -	\$6.3 - \$8.9 million
<i>Excludes impact of divestiture on performance of fund assets</i>	

Breakdown of initial costs of implementing a divestiture plan

Equities portfolio restructuring	Estimated cost
---	-----------------------

Some managers will not be able to customize their account mandates. APFC will need to search for replacement managers.

Manager search

Callan Associates (consultant) fee for three manager searches; \$26,000/search	\$78,000
Staff due diligence travel for manager searches	\$4,800

Transaction costs to transfer holdings to new managers

Transaction costs range from 0.25%-0.5% of portfolio value	
Tukman - manages \$523.6mm large-cap value portfolio	\$1.3 - \$2.6 mm
GEAM - manages \$494.7mm large-cap growth portfolio	\$1.2 - \$2.5 mm
GEAM - manages \$468.3mm EAFE fund	\$1.2 - \$2.3 mm

Transition Manager to facilitate holdings transfers	\$745,000
--	------------------

Legal

Review of contracts for 3 replacement managers, estimated at 2 days per manager; All remaining equities and fixed income contracts would need to be amended, estimated at a half-day per contract. We believe that in-house counsel will be able to absorb this workload.	\$0
---	-----

Internal costs to implement legislation

Additional staff costs to perform tasks in HB 287: Review public information, contact fund managers and other institutional investors to identify companies engaged in restricted activities; Contact identified companies to determine nature of business; If activities are deemed restricted, notify company to encourage divestiture; 90 day follow up to determine if company has complied with divestiture; Ongoing monitoring.	FY09	Ongoing
	\$33,775	\$11,580

Purchase of externally generated lists

IW Financial	\$13,000	\$13,000
RiskMetrics Group	\$12,000	\$12,000
KLD Research	\$5,000	\$5,000



Alaska Permanent Fund Corporation

Analysis of HB 287 Divest Investments in
Sudan

Breakdown of annual costs of implementing a divestiture plan

Note: Annual costs will be incurred in the first year as well as in subsequent years

Existing managers that need to customize their strategy or replacement managers may charge higher annual fees:	Estimated cost
Passive equity index manager - assume manager increases fee by 1 basis point. Since the APFC has \$5.1 billion in passive index assets, this would increase manager fees by \$509,000 per year.	\$509,000
Active US equity managers (large and small-cap) - assume managers increase fee by 2.5 bps. Since the APFC has \$4.7 billion in US equity assets, this would increase fees by \$1.2 million per year.	\$1.2 million
Active Non-US equity managers (global, developed and emerging) - assume managers increase fee by 5 bps. (Such firms may have more exposure in their portfolios and may experience a greater impact on how they manage their portfolios. They may need to find replacement stocks that they otherwise wouldn't have to worry about.) Since the APFC has about \$8.7 billion in global and non-US equity assets. This would increase costs by \$4.2 million per year.	\$4.2 million
Assume fixed income manager fees rise by 3%, producing an increase of \$381,000.	\$381,000

Note: Manager fees are based on the volume of assets under management. The increase in fees for customizing mandates for the first year is estimated at \$6.3 million. All budget projections for fees are based on APFC's midcase assumption of an annual growth in assets of 7% each year. Accordingly, we expect that this fee increase will adjust upwards at 7% each year.

General Consultant Costs

The general consultant may increase its fee to reflect its higher costs associated with monitoring the impact of divestiture. For example, for each manager running a customized strategy, that manager's performance would need to be compared to the non-customized strategy. The consultant would have to prepare analysis and report to the APFC board on a periodic basis.

Unknown

Operational Considerations that could affect the APFC Finance, IT, Training and **To be determined**

Higher compliance costs - need to monitor manager holdings

May need to add staff

May need to develop or buy special software

Nancy Manly

From: Amy Paige [paigedunker@alaska.net]
Sent: Friday, February 08, 2008 10:56 PM
To: Rep. Andrea Doll; Rep. Bob Lynn; Rep. Kyle Johansen; Rep. John Coghill; Rep. Max Gruenberg;
Rep. Bob Roses; Rep. Craig Johnson
Subject: Testimony on HB287

Members of the House State Affairs Committee:

I am sorry I cannot be present at the House State Affairs Committee meeting this Saturday, Feb. 9th to speak in person. I would like to submit comments in support of HB 287 which would call on the Permanent Fund managers to divest funds from companies doing business with Sudan. I believe it is important that our state resources not be invested in companies that are buying weapons and supporting militias responsible for more than 200,000 deaths and the displacement of 2.5 million people from their homes in the Darfur region of that country.

The Sudan Divestment Task Force has stated that:

As a result of targeted divestment efforts, over half a dozen major multi-national corporations have agreed to either suspend active business operations in the country or substantially expand humanitarian outreach programs.

The government of Sudan is heavily reliant on foreign direct investment and depends on this revenue to conduct the Darfur genocide, making the government particularly sensitive to the economic pressure exerted by divestment.

By targeting the most egregiously offending companies, the Sudan Divestment Task Force believes we can have the greatest impact and have a better chance of protecting the victims of the violence in that country. The U.S. government has declared that the situation in Darfur constitutes genocide. I find it unacceptable that our Alaskan funds are supporting this atrocity. There comes a time when the bottom line must be set aside as a measure of investment strategy.

I urge you to support this bill and send it to the full house for adoption.

Amy Paige
592 Scatter Street
Juneau, Alaska 99801

FISCAL NOTE

STATE OF ALASKA
2008 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HB 287
 () Publish Date: _____

Identifier (file name): HB287-DOR-TRE-02-08-08 Dept. Affected: Revenue 04
 Title: Divestment of investment in Sudan RDU: Taxation and Treasury
 Component: Treasury
 Sponsor: Rep Lynn
 Requester: House State Affairs Component Number: 121

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
		FY 2009	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
OPERATING EXPENDITURES							
Personal Services	33.8		11.6	11.6	11.6	11.6	11.6
Travel	4.8						
Contractual	2,954.3		2,876.3	2,876.3	2,876.3	2,876.3	2,876.3
Supplies							
Equipment							
Land & Structures							
Grants & Claims							
Miscellaneous							
TOTAL OPERATING	2,992.9		2,887.9	2,887.9	2,887.9	2,887.9	2,887.9

CAPITAL EXPENDITURES							
-----------------------------	--	--	--	--	--	--	--

CHANGE IN REVENUES ()							
-------------------------------	--	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF	2,992.9		2,887.9	2,887.9	2,887.9	2,887.9	2,887.9
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other Interagency Receipts							
TOTAL	2,992.9		2,887.9	2,887.9	2,887.9	2,887.9	2,887.9

Estimate of any current year (FY2008) cost: 00

POSITIONS

Full-time	0	0	0	0	0	0	0
Part-time	1.0		1	1	1	1	1
Temporary							

ANALYSIS: (Attach a separate page if necessary)

Please see the details on page two.

Prepared by: Brian C Andrews
 Division: Revenue / Treasury
 Approved by: Jerry Burnett
Department of Revenue

Phone 907 465-3669
 Date/Time 2/8/08 12:00 AM
 Date 2/8/2008

FISCAL NOTE

STATE OF ALASKA
2008 LEGISLATIVE SESSION

BILL NO. HB 287

ANALYSIS CONTINUATION

Identify and hire screening service providers - \$30,000

Decide on, hire, and fund information providers to provide a daily screening service that could be used by all of the ARMB's active managers.

IW Financial - \$13,000
RiskMetrics Group - \$12,000
KLD Research - \$5,000

Money manager contract revision - \$2.8 million

Restricting investment may require contract revisions and increases in management fees:

Passive equity index managers – assume fees increase by 1 basis point. With \$3.0 billion assets in this category, manager fees will increase by \$297,798 per year.

Active US Equity managers – assume fees increase by 2.5 basis points. With \$3.2 billion assets in this category, manager fees will increase by \$801,963 per year.

Active Non-US equity managers – assume fees increase by 5 basis points. With \$3.5 billion assets in this category, manager fees will increase by \$1.7 million per year.

Money manager replacement, incurred only in FY09 - \$82,800

Restricting investment may also result in a change in managers if some managers are unable or unwilling to comply.

Callan Associates fee for three manager searches: \$26,000/manager
Staff due diligence travel for manager searches: \$4,800

Internal cost for initial implementation - \$33,800 in FY09 and \$11,600/FY thereafter

Additional staff costs associated with monitoring and reporting for compliance with HB287

HB

291

REPRESENTATIVE KEVIN MEYER

HOUSE DISTRICT 30

House Bill 291

"An Act relating to requiring completion of a driver's education program for provisional driver's licensees."

Sponsor Statement

Alaska faces a serious problem with young driver crashes. While approximately 5% of Alaskan drivers are considered young drivers (16-20) they were involved in almost 30% of the major accidents on Alaska's roads. The weather, wildlife, long distances and hours of darkness combine with traditional hazards to make Alaska a challenging and dangerous environment in which to drive.

HB 291 adds a requirement that a person complete an approved driver's education course in addition to the current requirements for the provisional license. This will provide a level of professional education to Alaska's graduated driver's license system.

In 2005, the State of Alaska implemented a graduated driver's license system. Currently, when a person turns 14 they can obtain an instructional permit and may drive only when accompanied by an adult over the age of 21. When a person turns 16 and they have driven at least 40 hours in challenging circumstances and held an instructional permit for at least 6 months, a person may apply for a provisional license. A person holds a provisional license until they reach the age of 18, when they are eligible to receive a full license.

Unlike many other states with graduated driver's license systems, Alaska's does not include a requirement that a person complete a driver's education course. Instead, Alaska requires a parent or guardian to provide proof a person has had at least 40 hours of experience driving.

New data suggest that young driver fatalities actually increased from 2006 to 2007. Educating driver's early in their driving career can help them prepare for the challenging circumstances they face on Alaska's roads.

FISCAL NOTE

STATE OF ALASKA
2008 LEGISLATIVE SESSION

Fiscal Note Number: _____
Bill Version: HB 291
() Publish Date: _____

Identifier (file name): HB291-DOA-DMV-01-22-08 Dept. Affected: Administration
Title: "Requiring completion of a driver's education program..." RDU: Division of Motor Vehicles
Component: Motor Vehicles
Sponsor: Rep. Meyer
Requester: (H) STA Component Number: 2348

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below

	Appropriation Required	Information					
		FY 2009	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
OPERATING EXPENDITURES							
Personal Services							
Travel							
Contractual							
Supplies							
Equipment							
Land & Structures							
Grants & Claims							
Miscellaneous							
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CAPITAL EXPENDITURES	0.0						
CHANGE IN REVENUES ()	0.0						

FUND SOURCE (Thousands of Dollars)

	FY 2009	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
1002 Federal Receipts							
1003 GF Match							
1004 GF							
1005 GF/Program Receipts							
1037 GF/Mental Health							
1156 Receipt Supported Services							
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2008) cost: _____

POSITIONS

	FY 2009	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Full-time							
Part-time							
Temporary							

ANALYSIS: (Attach a separate page if necessary)

Assuming the cost of completing a driver's education course is born by the applicant for a license, this bill does not have a financial impact on the Division of Motor Vehicles, therefore, the Division submits a zero fiscal note

Prepared by: Whitney H. Brewster, Director
Division: Motor Vehicles
Approved by: Kevin Brooks, Deputy Commissioner
Department of Administration

Phone: 907-269-5574
Date/Time: 1/22/08 12:00 PM
Date: 1/22/2008

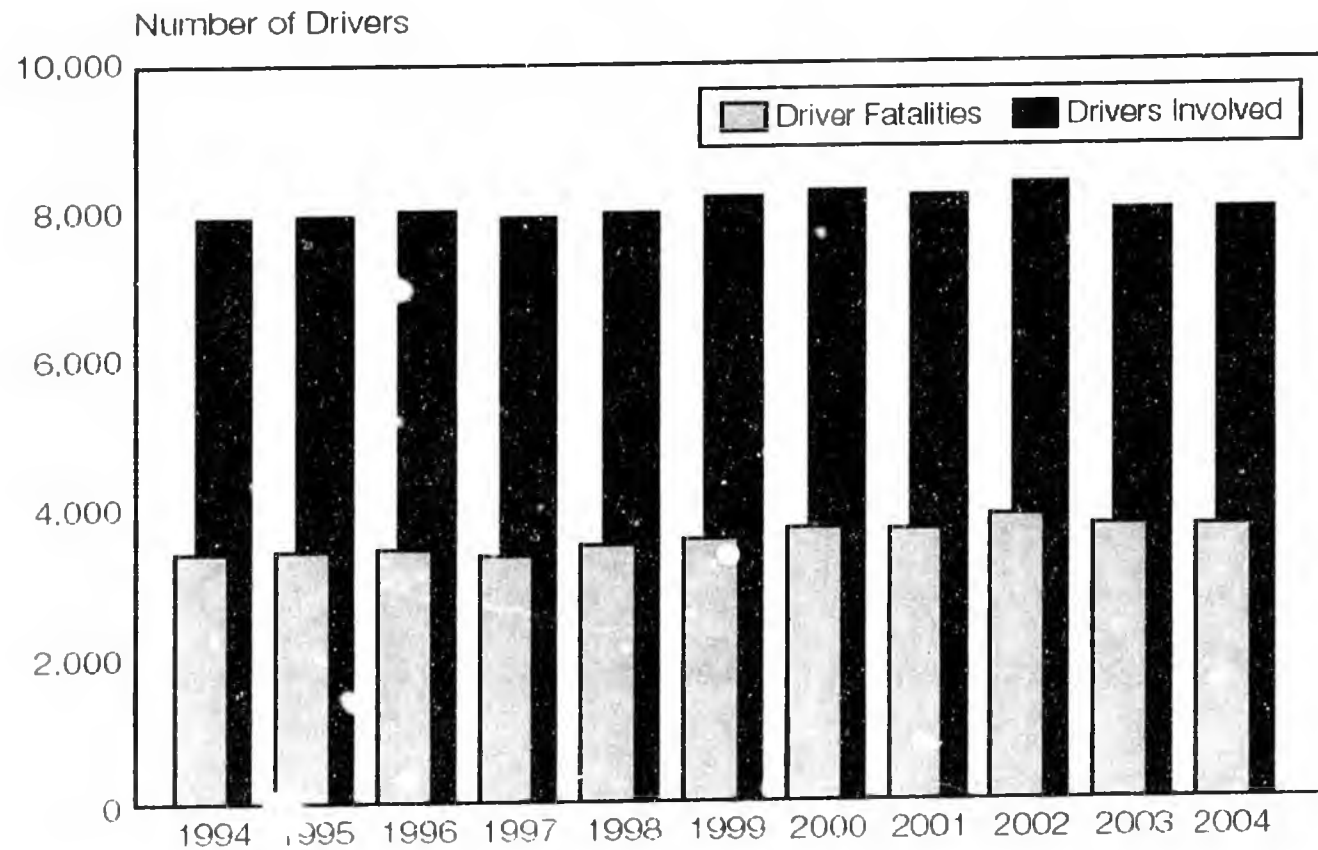


Your Driver License:

How to Get One, Keep One & Afford One



Teen Driver Car Crashes



- There are over 196 million licensed drivers in the United States
- Teen drivers make up 6.3 percent (12.4 million) of the total
- Teen driver deaths have increased 5 percent over the last 10 years
- 3,620 teen drivers were killed, 303,000 injured, and over 500,000 lost their licenses due to car crashes, in 2004
- Car crashes are the leading cause of death for teens

-Federal Department of Transportation

Alaska Crashes Without a License

Drivers Involved in Fatal Crashes and Driver Involvement Rates by Age Group, 2004

	Age Group (Years)							
	15-20	21-24	25-34	35-44	45-54	55-64	65-69	70+
2004 Population (Percent)	8.4	5.8	13.6	15.0	14.2	9.9	3.4	9.0
Drivers Involved in Fatal Crashes (Percent)								
- Single-Vehicle	17.4	13.9	20.2	17.6	14.1	8.4	2.4	5.6
- Multi-Vehicle	11.7	9.6	19.2	19.3	17.0	10.5	3.2	9.2
- All Fatal Crashes	13.8	11.2	19.6	18.7	15.9	9.7	2.9	7.9

- Out of 3,620 teens that died in car wrecks, in 2004, 342 did not have a driver's license
- Over 70% of these had a license suspension or revocation
- 29% of these had also been drinking

Alcohol's Effects on Alaska Teen Drivers

Alcohol Involvement Among Drivers Age 15 to 20 Involved in Fatal Crashes, 2004

Driver Status	Percentage with BAC			
	Number of Drivers	.00	.01 to .07	.08 or Higher
1994				
Survived	4,519	83	5	12
Fatally Injured	3,449	68	7	25
Total	7,968	76	6	18
2004				
Survived	4,278	85	4	11
Fatally Injured	3,620	71	5	24
Total	7,898	78	5	17

- Drinking and driving dramatically increases your chances of crashing
- In 2004, 5 percent of teen driver crashes involved severe property-damage
- Most teens in fatal car crashes had Blood Alcohol Level of .08
- Teen drivers are less likely to use restraint when they have been drinking



Alcohol's Cost for Alaskans



- **In 2000, alcohol related car crashes cost Alaska \$475 million – About \$758 for each resident**
- **Nationally, the average teen begins drinking at 12, in Alaska it's 14**
- **Nationally, 4,554 teens die each year to excessive alcohol use. 10-15 die statewide**
- **Alcohol kills six times more teens nationally and statewide than all other drugs combined: heroin, cocaine, methamphetamine, marijuana**
- **There are roughly 3 million teenagers who today are full-blown alcoholics. Statewide that number is over 10,000**
- **The total cost of underage drinking to the country is \$53 billion a year**

-Rep. Tom Osborne (R - NE) in a 2006 speech before Congress

DMV



Before you get your DRIVERS LICENSE:

- **Receive and successfully hold a valid instructional permit for a minimum of six (6) months**
- **Practice with an adult, of 21 or older, who has been licensed for 1 year**
- **Do not become involved in a traffic violation**
- **Have your parent, legal guardian or employer provide proof that you have had at least 40 hours of driving experience**

When you get a DRIVERS LICENSE:

- **You may NOT carry passengers under the age of 21, except siblings.**
- **You may NOT operate a motor vehicle between the hours of 1:00 a.m. and 5:00 a.m. Unless accompanied by a licensed driver who is at least 21 years of age unless driving to or from your place of employment**

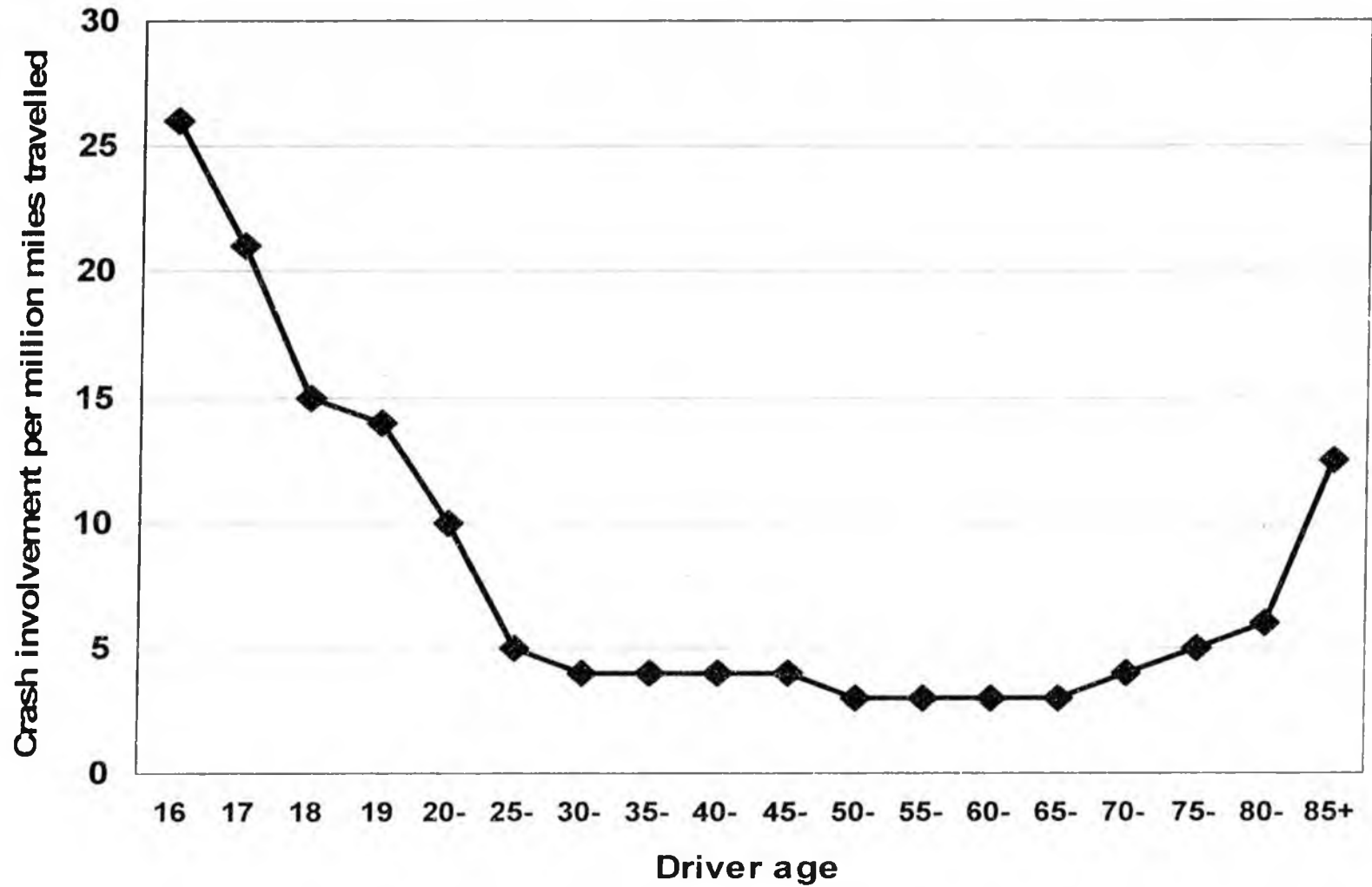


***Upon the age of 18, these restrictions no longer apply to you. If you choose to obtain a regular license at that time, you would be subject to the vision test and replacement license fees.**

Failure to follow Restrictions:

A violation of the restrictions will result in a \$200.00 penalty and a loss of 2 points from your license

Driver Crash Involvement per Million Miles Travelled, by Driver Age US, 2001-2002



Source: Insurance Institute for Highway Safety

The High Cost of Learning

- Only 12.7% of the national population is aged 16-24
- 10,321 teens died on the road in the US in 2005
 - This represents 23.75% of *all road fatalities* (42,443)
- 6,530 teens died at the wheel
 - This was 24.5% of *all driver deaths*
- In 2003, 1.37 other road users died for every 15-20 year old driver killed
- In 2002, NHTSA estimated the cost of 15-20 year-olds' crashes to be \$40.8 billion



+



=





How You Compare

International Driver Fatality Count



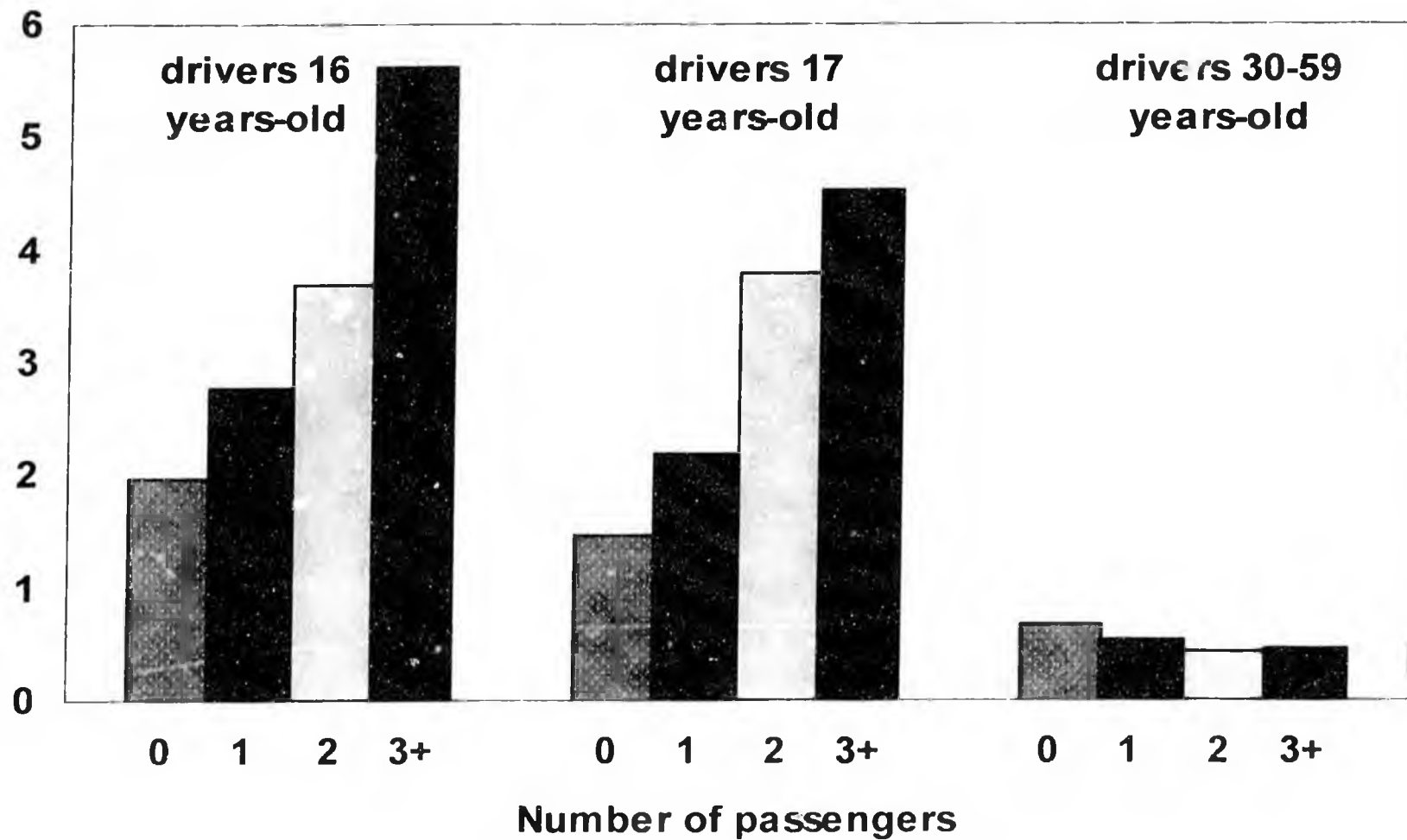
	0-14 Years			15-24 Years			25-54 Years			65 Years and more		
	1980	2003	2004	1980	2003	2004	1980	2003	2004	1980	2003	2004
Australia	-	106	78	-	427	428	-	818	821	-	266	255
Canada	-	113	95	-	681	698	2,304	1,491	1,423	542	465	489
France	919	223	190	4,236	1,560	1,525	-	3,090	2,853	2,092	1,099	949
Germany	1,159	208	153	4,917	1,708	1,533	5,761	3,367	2,950	3,196	1,329	1,201
Ireland	80	16	-	155	94	-	214	166	-	104	53	-
Italy	576	133	113	2,008	1,107	1,078	4,211	3,275	3,027	1,941	1,266	1,165
Japan	1,179	234	239	2,757	1,221	1,104	5,233	3,769	3,553	2,220	3,653	3,596
Norway	33	20	11	133	60	74	121	144	118	75	53	56
Slovenia	-	3	9	-	58	55	-	128	161	-	53	49
Spain	524	153	124	1,563	1,167	968	3,494	3,104	2,791	833	811	738
Sweden	71	21	14	174	116	97	397	274	230	206	118	139
England	499	145	147	2,001	973	927	2,270	1,865	1,687	1,407	658	580
USA	3,747	2,141	2,157	18,459	10,847	10,809	23,215	23,108	23,036	5,341	6,698	6,506

IRTAD

Source: International Road Traffic and Accident Database

The Effects of Passengers

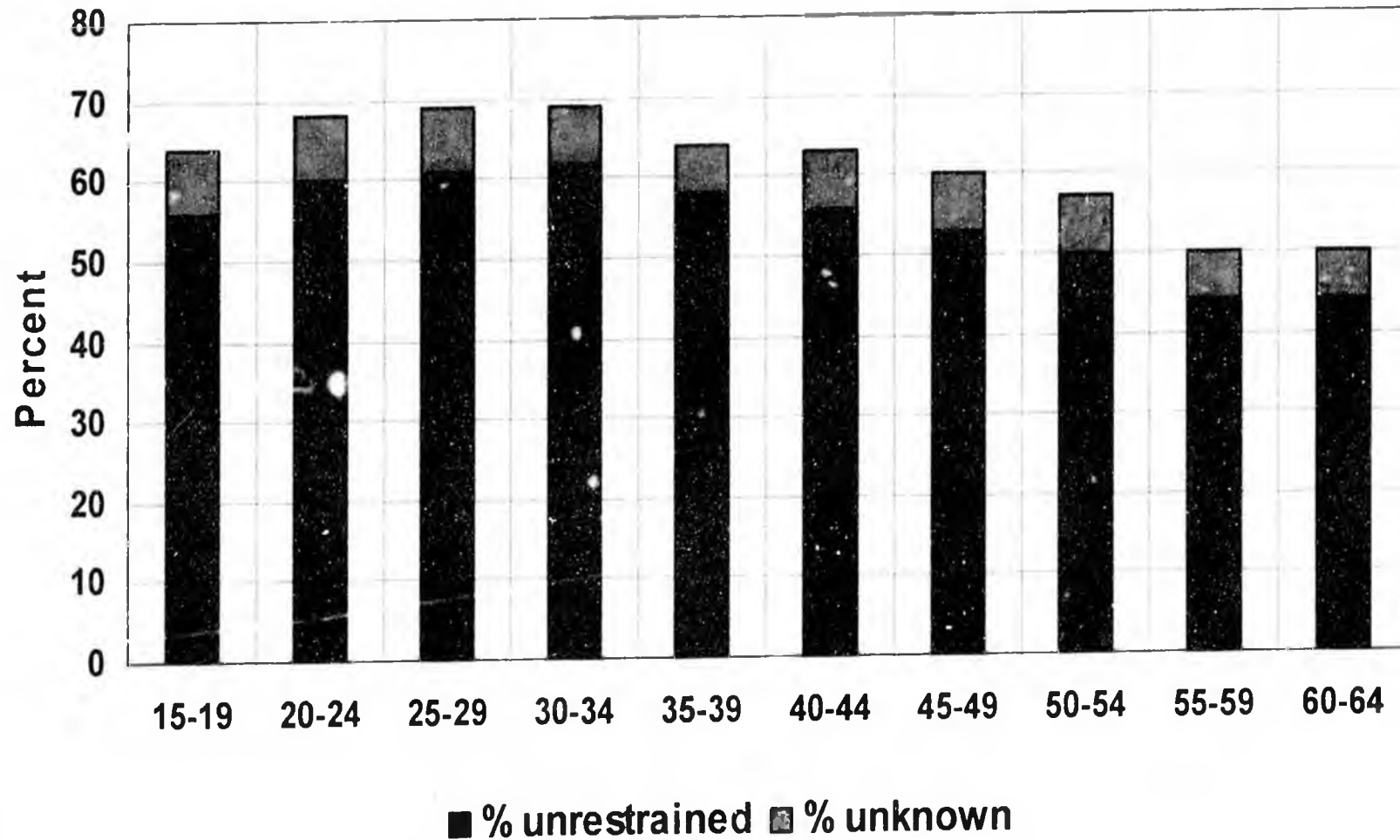
Driver Death Rates by Age and Passenger Presence per 10 Million Trips US,
1992-97



Source: Chen *et al.* (2000)

The Influence of Seatbelts

Proportion of Passenger Vehicle Occupant Deaths Unrestrained or Unknown
US 2005



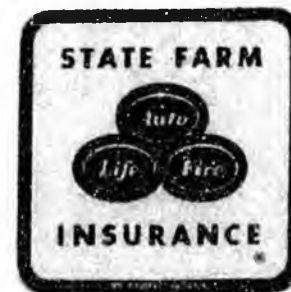
Source: National Fatal Accident Reporting System

How your age effects your insurance

- Nationally, the first car a teen will own will likely be a Toyota Camry, in Juneau it's likely to be a Subaru Loyale.
- The average amount a teen male pays for insurance, on a new car, is over \$3000 a year.
- Teen females in same situation: \$2700
- Teen males with a car that is over 10 years old: \$1700
- Teen females in same situation: \$1300

All of these numbers go up dramatically if you have an accident or traffic violation on your driving record.

PROGRESSIVE
DIRECT



-Information collected from the nation's 4 largest insurance companies

15 ways to reduce your insurance rate

Boys / Girls

STARTING INSURANCE RATE.....	\$ 3,047 / 2,677
• Be listed under your parents, as an occasional driver.....	\$ 2,249 / 1,665
• Earn a GPA of 3.0 or better.....	\$ 1,719 / 1,524
• Join a car club.....	\$ 1,620 / 1,487
• Establish a good credit rating.....	\$ 1,550 / 1,371
• Take an advanced driver's course like " <i>Driving for Life</i> ".....	\$ 1,432 / 1,266
• Keep a clean driving record.....	\$ 1,399 / 1,191
• New car total.....	\$ 1,399 / 1,191
• Used car total.....	\$ 915 / 814

Approximate total savings: \$ 1,700 / 1,500 a year

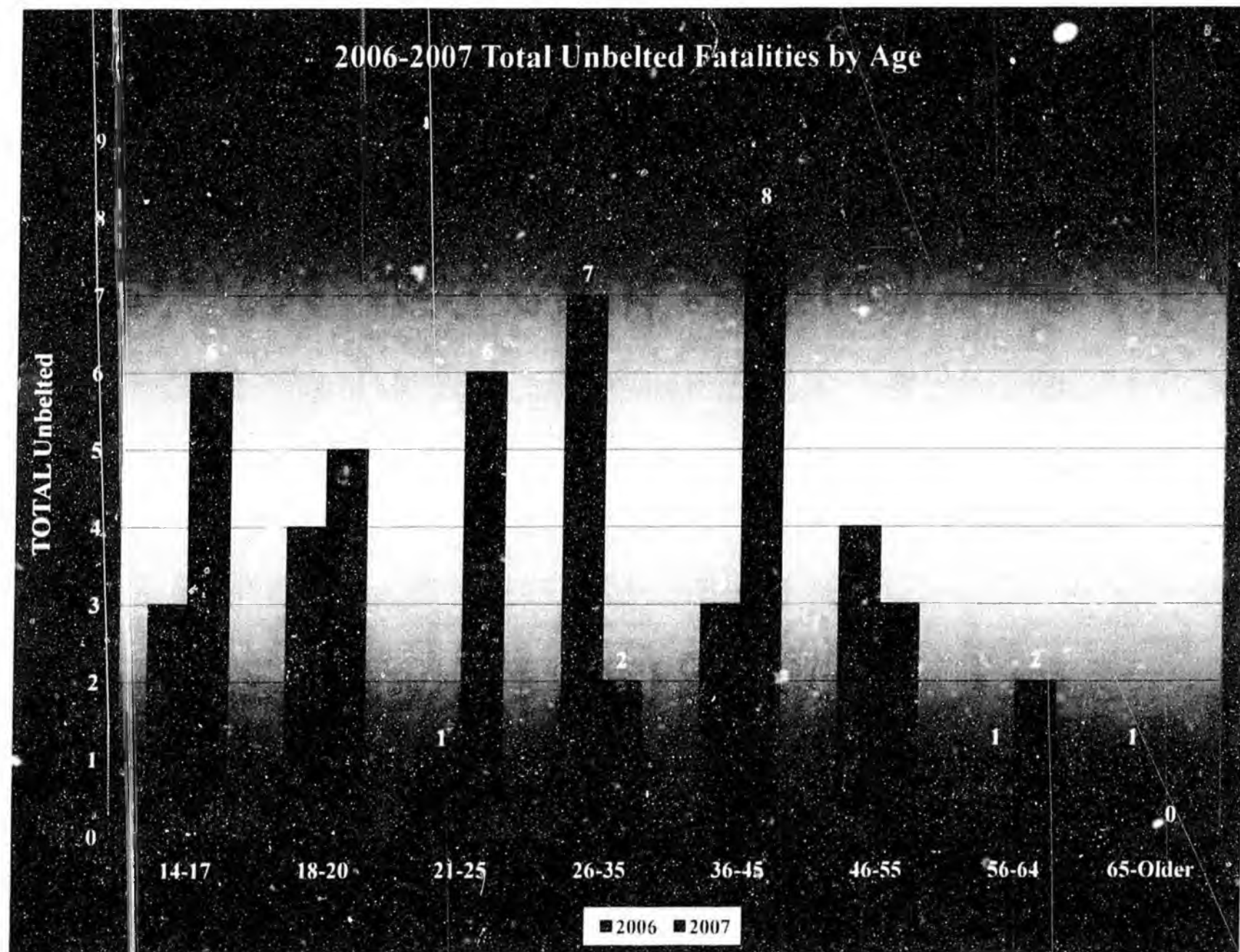
- Prices set by local leading insurance companies

Other Important Tips:

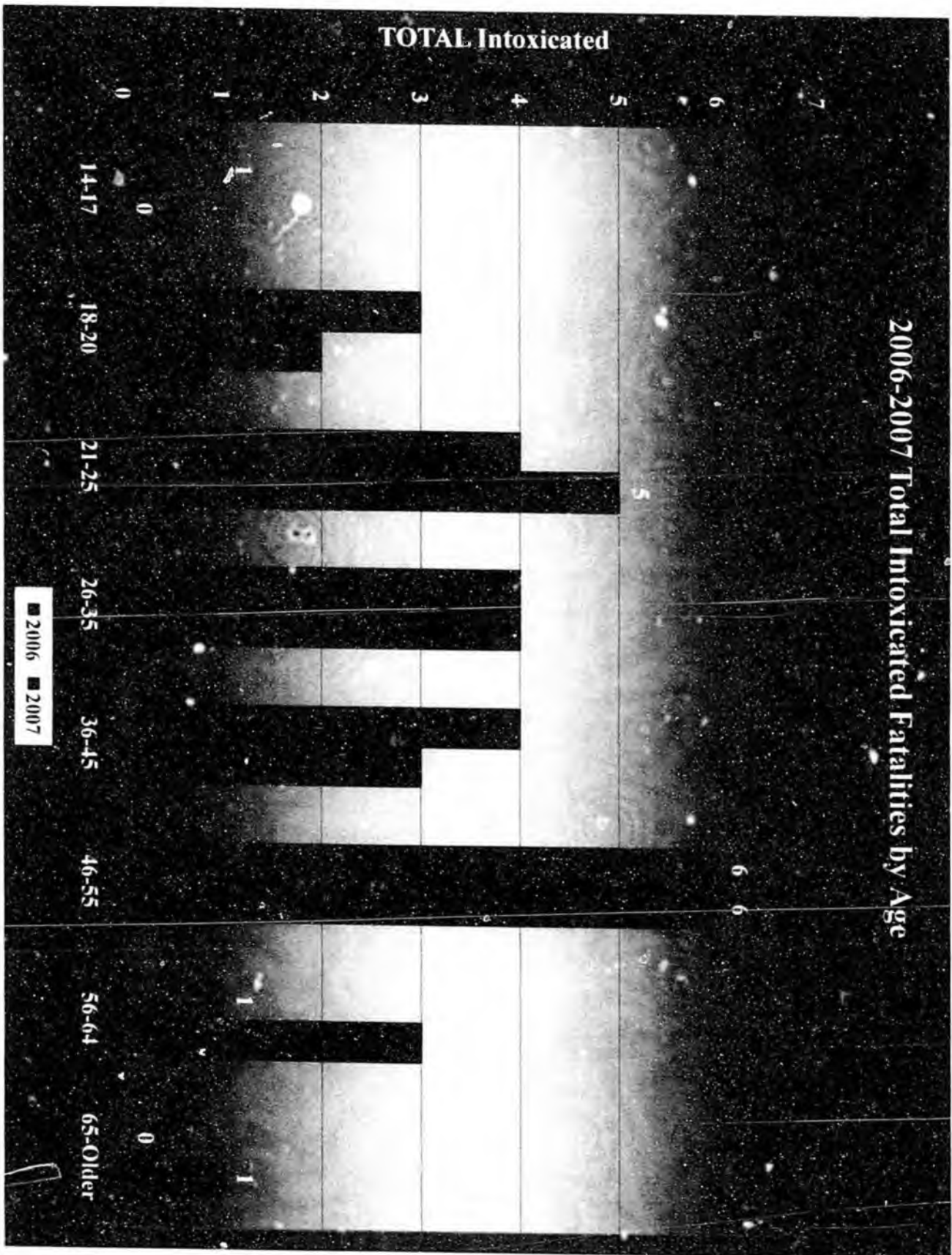
- Shop for insurance online
- Get quotes from every company
- Avoid paying by instalments
- Increase your excesses
- Avoid claims
- Add coverage to your car
- Don't lie about the value of your car
- Having lower mileage gets your premium lowered
- The insurance premium is highly based on your car



2006-2007 Total Unbelted Fatalities by Age



2006-2007 Total Intoxicated Fatalities by Age





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Graduated driver licensing and teenage driver research in 2006

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Abstract

This is the third update of research on graduated driver licensing (GDL) and related teenage driver issues. It briefly summarizes research published since or not included in the 2005 update (Hedlund, J., & Compton, R. (2005). Graduated driver licensing research in 2004 and 2005. *Journal of Safety Research*, 36(2), 109–119.), describes research in progress of which the authors are aware, and announces plans for a symposium on teenage driving and GDL to be held in February 2007.

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Keywords: Graduated driver licensing; Beginning drivers; Teenage drivers; Driver education

1. Introduction

The January 2003 special issue of the *Journal of Safety Research* was devoted entirely to graduated driver licensing (GDL). The first 12 papers, written for and presented at a GDL symposium in November 2002, provided a comprehensive review of research on teenage drivers with an emphasis on GDL. The final paper (Hedlund, Shults, & Compton, 2003) used information from these papers to summarize GDL knowledge, information gaps, and research needs as of the time of the symposium. All papers are available on the National Safety Council's website www.nsc.org/gdlsym-index.htm.

There has been substantial research on GDL and teenage drivers since the 2002 symposium. Hedlund and Compton (2004, 2005) provide annual summaries of newly-published results and work in progress. This paper is the third annual update. It briefly summarizes research published since or not included in the 2005 update and lists research in progress or planned. Published research was obtained from a keyword search of Medline, PsycInfo, ERIC, TRIS, NTIS,

Wilson Applied Science and Technology Abstracts, and EMBASE, supplemented by information provided by the authors and several reviewers.

2. What is GDL, and where has it been implemented?

GDL is a three-stage licensing system for beginning drivers consisting of a learner's permit, an intermediate license, and a full license. A learner's permit allows driving only while supervised by a fully licensed driver. An intermediate license allows unsupervised driving under certain restrictions. Both the learner's permit and the intermediate license have a minimum age requirement and must be held for a specified minimum period of time.

Other restrictions or requirements may apply during the learner's permit and intermediate license periods. The most common are that learner's permit drivers may be required to have a minimum amount of supervised driving before advancing to the intermediate phase, and intermediate license drivers may be prohibited from driving during specified nighttime hours or with young passengers. For a full discussion of GDL systems, requirements and restrictions, and recommended practices see Insurance Institute for Highway Safety (IIHS) and Traffic Injury Research Found-

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dation (TIRF; 2004) or Mayhew, Simpson, and Singhal (2005).

Almost all jurisdictions in the United States and Canada have implemented GDL in some form. The GDL requirements in all jurisdictions as of October 2005 are summarized in IHS (2005) for the United States and Mayhew et al. (2005) for Canada. The National Committee on Uniform Traffic Laws and Ordinances provides a model GDL law (NCUTLO 2002).

3. Syntheses and overviews

3.1. Extensive syntheses

Mayhew et al. (2005) contains a detailed description of current GDL programs in Canada; a comparison with GDL programs in other countries, including tabular summaries of GDL provisions in Canadian provinces, states in the United States, Australian states, and New Zealand; a description of the safety benefits of GDL, including a tabular summary of effectiveness estimates from evaluations and a discussion of the features that have been shown to contribute to GDL effectiveness; and recommendations for best practices.

Senserrick and Haworth (2005) provide a comprehensive review of driver education and training, licensing, and GDL, with well over 300 references. They provide specific recommendations for Western Australia.

Simons-Morton, Mickalide, and Olsen (2005) summarize research on young driver crash and injury rates; risk factors, including age, inexperience, nighttime driving, passengers, safety belt use and alcohol; and prevention strategies, including GDL and parental management.

Simons-Morton and Winston (2006) discuss GDL and parental management of young drivers as examples of how research translates into action by informing and influencing policy.

The Organization for Economic Co-operation and Development (OECD) has established a working group on Young Driver Risks and Effective Counter-Measures. The working group is assessing the factors that contribute to young drivers' crash risks; reviewing countermeasures, including driver education, driver training, and GDL; and documenting current practices in the OECD countries. A final report is scheduled for release in 2006. For information, contact Colin Stacey at Colin.STACEY@oecd.org.

The Highway Safety Research Center (HSRC) at the University of North Carolina is drafting a guide for states to use in reducing crashes involving young drivers. The guide is part of the series of state guides for implementation of the American Association of State Highway and Transportation Officials (AAHTO) strategic plan. Each guide is a volume in the National Cooperative Highway Research Program (NCHRP) Report 500. The young driver guide should be completed in 2006. For information, contact Rob Foss at foss@hsrc.unc.edu.

The Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the National Highway Traffic Safety Administration (NHTSA) are co-funding a National Research Council scoping study to examine new insights from the behavioral, cognitive, health, social, and biological sciences, especially in the area of adolescent development and learning processes, that may guide prevention strategies to reduce motor-vehicle crash rates. The study will examine diverse scientific literatures, including research on adolescent health and development, decision making research, parental and family processes, education, risk communication, public health, human factors studies, highway safety, motor-vehicle injuries, public policy, and related fields. The scoping study should be completed by late 2006. For information, contact Ruth Shults at rshults@cdc.gov.

The United Kingdom Department for Transport is funding an extensive review of the judgment and decision making literature to investigate potential road safety applications to adolescents. Victor Strecher and Jean Shope expect their review of psychosocial factors and behavioral science theoretical frameworks to be available in 2006. For information, contact Deirdre O'Reilly at dof@gst.gov.uk.

3.2. Brief overviews and commentary

Williams (2005) observed that by 2005 the first phase of GDL implementation was essentially complete in the United States and Canada, with most jurisdictions having some form of GDL in place. In the next phase, jurisdictions with weak GDL systems should strengthen them. He noted that 15 states have improved their initial GDL systems but that as of 2005 no state had an "excellent" system consisting of a minimum learner age of 16, a 6-month learner's permit holding period, and intermediate license restrictions on nighttime driving (beginning at 9 p.m.) and carrying more than one young passenger, with intermediate restrictions in place until age 18.

Stevenson (2005) observed that Australian GDL systems have no nighttime or passenger restrictions for intermediate license holders. He recommends that they be added.

McKay (2005) briefly reviewed teenage driver crash risks and advocates GDL with nighttime and passenger restrictions as well as safety belt use, not drinking and driving, and safer vehicles.

4. The need for GDL: teenage driver risk factors

Risk factor study methods include cohort studies, focus groups, telephone surveys, questionnaires, crash data analyses, and experimental studies. They provide additional detail on the influences of general lifestyle and of specific individual and environmental factors on teenage driver crash risk.

4.1. Teenage driver crash risks

Williams, Ferguson, and Wells (2005) used Fatality Analysis Reporting System (FARS) data to investigate fatal crashes involving 16-year-old drivers in the United States from 1993 to 2003. During this period 46 states and the District of Columbia introduced important GDL components. The per capita fatal crash rate for 16-year-old drivers decreased 26% from 1993 to 2003 compared to 11% for 17-year-old drivers, 6% for 18-year-old drivers, and 7% for 20–49 year-old drivers. Fatal crashes per licensed driver did not change for 16-, 17-, or 18-year-old drivers. There was a substantial decrease in fatal crashes in which 16-year-old drivers had teenage passengers but no change in late-night fatal crashes.

O'Malley and Johnston (2003) summarized data from the annual Monitoring the Future surveys from 1976–2001. In 2000–2001, 32% of high school seniors in the United States reported receiving a traffic ticket or warning in the past year and 22% were involved in a crash. Over the 25-year period, the annual proportion who received tickets increased slightly while the proportion involved in a crash remained relatively stable. When adjusted for miles of travel, both proportions decreased over time. Crashes after drinking decreased markedly from 1981 to 2001. Crashes after using marijuana peaked in 1979, decreased substantially over the next decade, and then rose again in the 1990s.

AAA (2006) studied fatal crashes involving drivers aged 15, 16, and 17 using FARS data from 1995–2004. Of the 30,917 persons who died in these crashes, about one-third were the teen drivers themselves (36%), one-third were passengers of these teen drivers (32%, almost all of whom were under 21 years old), and the remainder were other vehicle occupants (24%) and nonmotorists (8%).

Gonzales, Dickinson, DiGiuseppi, and Lowenstein (2005) studied fatal crashes involving 16-year-old drivers in Colorado, using FARS data from 1995 to 2001. Compared to drivers aged 25–49, 16-year-old drivers in fatal crashes were more likely to be reported as speeding or driving recklessly, more likely to be in a rollover, run-off-road, or single vehicle crash, and more likely to have two or more passengers, but less likely to have been drinking. Almost half the drivers in both groups were not wearing safety belts.

Aultman-Hall and Padlo (2004) studied crashes involving drivers aged 16–20 in Connecticut, using state crash data from 1997–2001. With the use of quasi induced exposure techniques, they concluded that the risk of causing a crash for these drivers increases at night, on freeways, and with passengers. The youngest drivers and male drivers also had substantially higher crash risks.

Adams (2005) compared overall crash rates and crash distributions by hour for intermediate-stage drivers and fully-licensed drivers aged 19–59 in Western Australia. She found that both fatal and hospitalization crash rates per population were about seven times higher for intermediate

stage drivers, both overall and for male and female drivers separately. Intermediate-stage drivers had a higher proportion of crashes at night. Western Australia has no nighttime restriction for intermediate stage drivers.

Bellavance et al. (2005) reviewed the literature on psychological factors underlying teenage risk-taking, factors that predict risky behavior, and methods to evaluate the attitudes and driving behaviors of beginning drivers. The 525-page review is available at www.hec.ca/pages/francois.-bellavance/Nouveaux-conducteurs.pdf. The authors are preparing shorter summaries in English for journal publication. For information, contact François Bellavance at francois.bellavance@hec.ca.

IHS and TRF have reviewed studies since 1990 on the relative effects of age and experience on crash risk, especially for young drivers. The report should be released in spring 2006. For information, contact Anne McCartt at AMcCartt@ihs.org.

The Preusser Research Group (PRG) is studying crashes during the first few months of driving. The study, sponsored by IHS, should be released in 2006. For information, contact Susan Ferguson at sferguson@ihs.org.

Rhodes and colleagues at the University of Alabama Injury Control Research Center are conducting a five-year study to develop and test risk-taking countermeasures for drivers aged 16–20. Initial information on crash risks and teenage driver attitudes obtained from analyses of Alabama crash data and from a series of focus groups with young drivers are summarized in Rhodes, Brown, and Edison (2005).

In a study funded by CDC, The University of Michigan Transportation Research Institute (UMTRI) will use existing longitudinal data to identify risk and protective factors related to crashes involving teenage drivers. Information about the psychosocial and problem behavior development of a large cohort of public school students who were followed from the 5th through the 12th grade will be merged with their state drivers license history records and police crash report records. The study will identify types of crashes for which teens are at greater risk than adult drivers, and examine individual psychosocial risk and protective factors that predict the high-risk crash types among teen drivers. For information, contact Ruth Shults at rshults@cdc.gov.

CDC will convene an expert panel to identify and critically assess existing datasets that provide information on adolescent motor-vehicle related crashes, injuries, and fatalities. This panel will bring together experts in such areas as transportation, health outcomes, insurance costs, and health care utilization. A report will summarize the different existing datasets, critically assess their strengths and weaknesses, identify gaps, and propose linkages. The report should be available by late 2006. For information, contact Ruth Shults at rshults@cdc.gov.

The National Institute of Child Health and Human Development is beginning a multi-year naturalistic driving

study of teenagers during their first 18 months of licensure. The study, conducted by the Virginia Tech Transportation Institute, will equip the cars of 24 teenage drivers with cameras, motion sensors, global positioning instrumentation, and other devices to measure and record driving performance. Initial data will be available in 2007. For information, contact Bruce Simons-Morton at mortonb@exchange.nih.gov.

4.2. Sociodemographic characteristics

Paschall (2003) studied the relation between college attendance and two risky driving behaviors — safety belt use and drinking and driving — in a sample of 11,549 college-age youth from the National Household Survey on Drug Abuse (NHSDA). He found that college students were more likely to drink and drive but also more likely to wear safety belts than non-students, after controlling for other factors related to these behaviors.

Elliott, Shope, Raghunathan, and Waller (2006) investigated associations between gender, substance use, environmental factors that may affect substance use (peers, parents, and ease of access), and risky driving behavior in a longitudinal study of 4,022 high school students in Michigan. Overall, young women had lower levels of substance use and less risky driving (measured by serious traffic offenses and crashes) than young men. At every level of substance use, men had higher levels of risky driving than women. However, substance use and environmental factors were more closely associated with risky driving among young women than young men. For example, as substance use levels increased, risky driving increased more for women than for men.

In three related studies, Laflamme and colleagues investigated sociodemographic characteristics associated with young drivers' crashes in Sweden using crash records from 1988–2000 for all persons born in 1970–1972. Hasselberg and Laflamme (2005) found that young drivers who sustained more than one crash injury in an 8-year period did not differ from drivers who sustained only one injury with regard to gender, education, or socioeconomic group. Vaez and Laflamme (2005) found that among all drivers less than 30 years of age who were involved in crashes, the odds of severe injury were higher for the youngest drivers, for drivers who were impaired by alcohol, and for drivers with less education. Males and drivers with the least education were most likely to have been impaired by alcohol. Laflamme, Vaez, Hasselberg, and Kullgren (2005) examined how the interaction between a driver's socioeconomic status and the safety of the driver's car affects injury risk. For drivers of cars in each of five crash safety groups determined by Folksam insurance, injury risk was higher for males and for less-educated drivers. This suggests that safer vehicles reduce crash injuries for all socioeconomic groups and do not reduce injury risk differentials across groups.

4.3. Attitudes and personality

4.3.1. Attitudes and behavior regarding risk

Clarke, Ward, and Truman (2005) studied 3,437 crash reports from the United Kingdom involving drivers aged 17–25 from the years 1994–1996. Based on interpretation of the individual crash reports, crashes of all types were more frequently due to voluntary risky behaviors than to lack of driving skills such as failure to observe potential hazards.

Harré, Foster, and O'Neill (2005) studied "crash-risk optimism" — the view that while a behavior is risky for others, it's not risky for me — and how these beliefs are related to young drivers' reactions to traffic safety messages. In a survey, 314 New Zealand students aged 16–29 generally rated themselves better than their peer drivers on measures of both driving skill and driving caution. In a second study, 266 students viewed traffic safety television ads that were either highly graphic, with crashes and injuries resulting from drinking and driving, or positive, showing people taking measures to avoid driving after drinking. The students then took the crash-risk optimism survey. Students who watched the graphic ads rated themselves better on driving skill than the students who watched the other spots. This suggests that some young drivers may dissociate themselves from the types of driving behavior depicted in graphic traffic safety ads, so that graphic ads may have little effect on them. In both groups, men rated their driving skill higher than did women.

Victor, Eertmans, Van den Bergh, and Van den Broucke (2005) studied how beginning drivers' attitudes, norms, and intentions predicted their driving performance in a 90-minute on road driving session. Ninety-eight Flemish drivers, average age 22, participated in the study. A model based on the theory of planned behavior predicted performance as evaluated both by the participants themselves and by instructors. Driving confidence (or self-efficacy — a driver's belief that he or she is able to control the car, anticipate risks, and the like) was the most important single predictor of performance.

Lilleczek (2004) studied and described the youth driving culture in a northern Ontario community using a survey and direct observations of 88 novice drivers aged 15–34. The results suggest that youth are aware of the risks of driving and intend to drive safely. However, the "system" does not encourage safe driving when it characterizes youth as risk-takers and blames individuals for risky actions.

Sarkar and Andreas (2004) investigated risky driving behaviors in brief surveys of two groups of young California drivers: 1,430 beginning drivers in driver training programs and 880 licensed teenage drivers who were attending traffic school after receiving a moving violation. All drivers recognized that alcohol-impaired driving, sleepiness, speeding, and similar driving behaviors were risky. Drivers who had experienced these behaviors, either through their own

driving or in a car with another driver, rated them as less risky than those who had not.

Bina, Graziano, and Bonino (in press) studied risky driving and other risky behaviors in a survey of 645 Italian youth aged 14–17. Many of these teenagers drove cars and motorcycles without a proper license, frequently speeding or following too closely. Risky driving was associated with other risky activities, anti-social behavior, smoking, and drug use.

4.3.2. Personality traits

Dahlen, Martin, Ragan, and Kuhlman (2005) investigated how driving anger, sensation seeking, impulsiveness, and boredom proneness correlated with aggressive and risky driving in a survey of 224 college students in Mississippi. Driving anger was most predictive, followed by sensation seeking, with modest contributions from impulsiveness and boredom.

Ulleberg and Rundmo (2003) studied how personality affects driving behavior in a survey of 1,932 Norwegian adolescents whose average age was 18.5 years. They concluded that personality traits, such as sensation-seeking and normlessness, affect attitudes toward traffic rules and the enjoyment of driving, which in turn affect driving behavior and risk-taking.

Fernandes and Job (2003) studied how various demographic, personality, and attitudinal factors predict different risky driving behaviors in a survey of 109 Australian university students under 22 years old. They found that different factors predicted different behaviors: for example, authority rebellion predicted speeding while sensation seeking and crash-risk optimism predicted driving after drinking. A survey of 115 older drivers found different predictors.

Sánchez Martín and Estévez (2005) studied 144 young drivers in Spain when they first enrolled in a driving course, at average age 22.5, and again five years later, at which time 40% reported at least one crash. Cluster analyses produced two quite different cognitive profiles related to crash involvement: one with relatively high practical intelligence, good hand-eye coordination, and good perceptual-motor performance; the other with lower practical intelligence, poor hand-eye coordination, and poor perceptual-motor performance.

4.3.3. Developmental factors

In a series of four papers, Bingham and Shope (2004a, 2004b, 2005, in press) investigated the relationships between various personal and social characteristics of teenagers in their high school years and their subsequent driving behavior. Data for all four studies came from a longitudinal survey of approximately 2,000 Michigan young adults who were contacted in 10th grade, 12th grade, and at average age of 24. The first study (2004a) found that self-reported driving under the influence of alcohol or drugs at age 24 was predicted during high school years by alcohol

and drug use and by tolerance of social deviance. Self-reported risky driving at age 24 was predicted in high school by alcohol use, tolerance of deviance, less cigarette smoking, and better high school grades. The second paper (2004b) investigated risky driving predictors in more detail. High school students with lower levels of parental monitoring and greater permissiveness, weaker social development, and higher levels of alcohol, drug, and cigarette use were more likely to become risky drivers as young adults.

The third and fourth papers (Bingham and Shope, 2005, in press) investigated how these characteristics in high school predicted crash patterns in the teenage and young adult years as recorded in Michigan driver history records. After adjusting for driving exposure, higher or increasing crash rates were predicted in high school by less parental monitoring, more tolerance for deviance, lower grades, and more substance use.

Taubman-Ben-Ari, Mikulincer, and Gillath (2005) studied associations between driving behaviors of parents and their adult children through a survey of 174 Israeli families. They found significant associations between the driving styles (anxious, reckless, angry, or careful) of parents and children, especially between fathers and sons and between mothers and daughters.

Sagberg and Bjørnskau (2006) investigated whether beginning drivers improve their hazard perception skills during the first few months of driving. There were no significant differences in performance on a video-based hazard perception and reaction test among four groups of drivers who had been licensed for one, five, and nine months and 6+ several years, respectively.

4.4. Alcohol and drugs

4.4.1. Prevalence and trends

In the 2002 and 2003 U.S. National Surveys on Drug Use and Health (NSDUH) of over 32,000 persons aged 16–20, 21% reported that they had driven in the past year while under the influence of alcohol (17%) or drugs (14%) (SAMHSA, 2004b). The proportion reporting they had driven under the influence of alcohol or drugs rose steadily with age from 10% of respondents aged 16 to 28% of those aged 20.

In the 1999–2001 NSDUH surveys, 10% of drivers aged 15–17 reported that they had driven in the past year under the influence of alcohol (SAMHSA, 2004a).

In the 2001 Ontario Student Drug Use Survey, 15% of young drivers in grades 10–13 reported driving within an hour after consuming two or more drinks and 20% reported driving within an hour after using cannabis (Adlaf, Mann, and Paglia, 2003). The corresponding rates for young drivers in grades 10–12 from the 2002–2003 Student Drug Use Survey in the Atlantic Provinces were 12% for alcohol and 15% for cannabis (Asbridge, Poulin, & Donato, 2005). Both driving after drinking and after using cannabis were correlated with higher crash rates.

4.4.2. Attitudes and behavior

In a 2002 survey of 400 drivers aged 19–25 in California, 88% believed it was easy for underage persons to obtain alcohol, 34% reported that they had driven after drinking, and 17% after drinking too much to drive safely. More than half believed it was likely they would be stopped by police if they were driving after drinking (University of California Traffic Safety Center, 2003).

McCarthy and Brown (2004) surveyed 2,865 students in four California high schools to investigate how obtaining a drivers license affected drinking behavior. Teens increased their drinking frequency, but not the amount consumed on each drinking occasion, after they received their license, compared to similar-aged teens who were not licensed. Newly licensed drivers also had a higher perception of the dangers of drinking and driving.

Davey, Davey, and Obst (2005) surveyed alcohol and drug attitudes and behavior among 275 university students in Queensland, Australia, of average age 25. Fourteen percent reported that they had driven "under the influence of alcohol" in the past month and 15% had driven within six hours of drug use in the past year. Attitudes regarding driving after drinking and after using drugs were very similar and generally unfavorable. Peers had a strong influence on attitudes.

Van Beurden, Zask, Brooks, and Dight (2005) studied the relation between binge drinking (defined as six or more drinks at one occasion) and alcohol-impaired driving by surveying students in 40 high schools in New South Wales, Australia. Frequent binge drinkers were more likely to report driving after drinking.

Pinsky, Labouvie, and Laranjeira (2004) surveyed the attitudes regarding drinking and driving of 2,166 young Brazilians aged 18–25 who were about to receive their drivers licenses. Respondents generally did not hold firm attitudes and appeared open both to driving after drinking and to finding other transportation options to avoid driving after drinking.

Sabel, Bensley, and Van Eenwyk (2004) examined associations between self-reported drinking and driving or riding with a drinking driver and other health risk factors in a survey of 2,955 high school students in the state of Washington. Both drinking and driving and riding with a drinking driver were associated with low levels of support from parents and schools and with other risky behaviors such as drinking frequency and quantity, drug use, cigarette smoking, and low safety belt use.

Leung and Starnier (2005) investigated how age and alcohol affect performance on a driving simulator. Sixteen young (19–21) and older (25–35) Australian drivers each were tested at a target blood alcohol content (BAC) of 0.08 and with a no-alcohol placebo. Alcohol at 0.08 BAC affected all drivers' abilities to divide attention but had little effect on their ability to make decisions. In general, the younger drivers drove in a more risky manner and older drivers took longer to detect potential hazards.

Jennifer Zakrajsek and Jean Shope are conducting a longitudinal examination of underage drinking and subsequent risky driving. Young people who begin drinking by middle school subsequently have worse records for driving overall and driving after drinking than those who do not. Results should be available in 2006. For information, contact Jean Shope at jshope@mail.umich.edu.

4.4.3. Drinking locations

Walker, Walters, Grube, and Chen (2005) studied how drinking location affected drinking and driving and riding with a drinking driver through a telephone survey of 1,534 persons aged 15–20 in California. The strongest predictors of both behaviors were heavy drinking and drinking in cars. Drinking in restaurants also predicted drinking and driving. Gender, age, and ethnicity had little effect after controlling for alcohol consumption.

Usdan, Moore, Schumacher, and Talbott (2005) studied drinking locations in a survey of 91 college students identified as being at high risk for drinking and driving. These students had a higher blood alcohol content when driving after drinking at a party than when driving after drinking at other locations.

4.4.4. Prevention, education, and enforcement programs

Elder et al. (2005) synthesized studies of high school programs to prevent alcohol-impaired driving. They found evidence of small and inconsistent effects on driving after drinking, small and consistent effects on riding with a drinking driver, and insufficient evidence of effects of either peer organization programs (such as Students Against Destructive Decisions, SADD) or social norming programs.

Carcailon, Salmi, and Atout-Route Evaluation Group (2005) found a positive but not statistically significant effect for "Atout-Route," an educational program including a contract through which young drivers promise not to drive after drinking, using drugs, or while fatigued. Nelson, Weitzman, and Wechsler (2005) found significant reductions in driving after drinking, driving after five or more drinks, and riding with a drinking driver resulting from "A Matter of Degree," a program directed at a college campus environment that encourages heavy drinking.

Clapp et al. (2005) report the results of a publicized enforcement program to reduce driving after drinking among college students. The program included increased law enforcement through checkpoints and roving patrols coupled with media and social marketing campaigns to increase student perceptions of the risk of arrest. Self-reported driving after drinking decreased significantly after the program among students in the experimental site and remained stable at the comparison site, both of which were large public universities in southwestern United States.

4.4.5. Drinking and driving laws

In 1999, New Zealand reduced the minimum alcohol purchase age from 20 to 18. Kypri et al. (2006) compared

crash data for four years before and two years after the law change. The alcohol-involved crash rate per population increased by 12% for men aged 18–19, by 14% for men aged 16–17, by 51% for women aged 18–19, and by 24% for women aged 16–17.

U.S. GDL laws typically do not address driving after drinking because every state has a zero tolerance law that prohibits persons under the age of 21 from driving with a blood alcohol content exceeding 0.02. Carpenter (2004) studied the effects of zero tolerance laws using 1984–2001 Behavioral Risk Factor Surveillance System (BRFSS) data. He found that these laws reduced binge drinking (five or more drinks at one sitting within the past month) among males age 18–20 by 13% compared to males age 22–24. He also found a corresponding increase in moderate drinking among males, suggesting that zero tolerance laws may moderate heavy drinking rather than eliminate drinking altogether. Results for females were ambiguous.

4.5. Speed and other driving behavior

Whissell and Bigelow (2003) created and validated a 14-item speeding attitude scale that had a significant but low correlation with speeding tickets in a sample of 257 undergraduate students in Ontario. Redshaw (2004) reported the views on speeding of young drivers in New South Wales who participated in focus groups. Participants were comfortable with speeding and valued it as a way to save time. They expressed impatience with slow drivers and considered driving at 10 to 20 km above the speed limit to be normal. They characterized speeding as driving 40 km or more above the limit.

Two studies compared driving behaviors of 18 newly-licensed teens and 18 experienced adult drivers on a test track. Lee, Olsen, and Simons-Morton (2006) found that the teens had significantly fewer glances to the rearview mirror than the adults during both baseline driving and while performing in-vehicle tasks such as operating a radio or cell phone. Olsen, Simons-Morton, Lee, and Neale (in press) studied behavior when approaching a signalized intersection. The adults were more likely to stop when the traffic light switched from green to amber at each of three distances from the intersection. When approaching the intersection while performing a cell phone task, one-quarter of the teens failed to stop even after the traffic light turned red, while all the adult drivers stopped.

4.6. In-vehicle distractions

Simons-Morton, Lerner, and Singer (2005) documented the effects of teenage passengers on young drivers. They observed vehicles leaving parking lots at 10 high schools, recorded the gender and age (teen or adult) of drivers and any passengers, and recorded the vehicle's speed and headway at a nearby site. Teenage drivers drove faster and with shorter headways than general traffic. Drivers with male teenage passengers drove even faster and with shorter headways.

IHS is reviewing and summarizing the international research literature on the effects of passengers on teenage drivers, especially the effect of teenage passengers. The study should be completed in 2006. For information, contact Susan Ferguson at sferguson@ihs.org.

Driver distraction resulting from cell phone use has been documented extensively. As of 2005, two states, the District of Columbia, and several communities prohibit hand-held cell phone use while driving. Ten states and the District of Columbia prohibit all cell phone use by drivers with a GDL or all drivers under the age of 18 (Governors Highway Safety Association [GHSA], 2005). Strayer and Drews (2004) studied the distracting effects of cell phone conversations in simulated driving. They found similar effects for both younger (age 18–25) and older (age 65–74) drivers. Lerner and Boyd (2005) studied the willingness of 88 drivers to engage in various distracting tasks involving cell phones, personal communication devices, vehicle navigation systems, passengers, and food. The 22 teenagers perceived the tasks as less risky and were more willing to engage in them than older drivers.

4.7. Drowsy driving

It is well-documented that drowsy driving (driving while sleepy or fatigued) causes crashes and also that many young persons do not get enough sleep. Two studies explored the role of sleep for young drivers. Carskadon (2002) reported on two surveys of several hundred high school and college students. Two-thirds of the drivers in one survey reported having driven while sleepy, and one-fifth in the other reported they had fallen asleep while driving. The students believed that driving while sleepy is less risky than driving while impaired by alcohol. Smith, Carrington, and Trinder (2005) investigated the relationship between predicted and perceived sleepiness while driving in 47 young persons aged 18–25 over four weeks. Participants often drove when they perceived themselves to be sleepy. Many of these trips were at times when sleepiness could be predicted because the driver had been awake for a long period.

4.8. Medical conditions

Barkley (2004) provides an overview of the how attention-deficit or hyperactivity disorder (ADHD) can affect driving, among younger and older drivers alike, and suggests potential strategies to control its effects.

4.9. Vehicles driven

Kindelberger and Eigen (2003) documented crash characteristics for young drivers of sport utility vehicles (SUVs). From 1992 through 2001, about one-quarter of all SUVs in crashes had drivers aged 16–24. These young drivers were substantially more likely to roll their SUV

over in a crash than older drivers, especially if the young drivers were in older SUVs.

Williams, Leaf, Simons-Morton, and Hartos (2006) studied vehicle access and ownership of 3,743 Connecticut teenagers in their first year of licensure. More than half of both male and female teens owned a vehicle when they were first licensed and almost all had regular access to a vehicle. A year later, 74% owned a vehicle. About half of the teens drove small passenger cars and about one-quarter drove SUVs, pickups, or sports cars. At licensure, teens who owned vehicles reported that they averaged 90 miles of weekly driving and teens who did not own vehicles reported an average of 51 miles. Leaf, Simons-Morton, Hartos, and Northrup (2005) investigated the accuracy of these mileage estimates using a subsample of 118 teens. The teens' simple report of their total mileage for the week was 20–30% lower than estimates obtained by asking about each trip throughout the week or from trip logs.

Yannis, Golias, and Papadimitriou (2005) investigated the combined effects of driver age and engine size on motorcycle crashes in Greece. Once the interaction of driver age on accident fault was taken into account, engine size had no effect.

4.10. High school policies

McCart, Geary, and Solomon (2005) studied the effects of a high school policy requiring safety belt use for everyone in the cars of student drivers with parking permits. Few of the 38 schools contacted for the study were interested in adopting such a policy. Driver belt use, measured at the school, increased from 42% to 67% after the policy was implemented in one school in Mississippi, a state with a secondary belt use law and generally low rates. Passenger belt use increased from 16% to 61%. The policy had no effect in one school in Connecticut, where 86% of drivers and 79% of passengers were belted before the policy.

Stone and Runyan (2005) studied the effect on crash rates of high school policies allowing students to drive off campus during lunchtime. They found significantly higher crash rates for teenagers during lunch hours in two North Carolina counties with these open-lunch policies compared to one county in which students remained on campus.

HSRC is completing a study of the effect of high school starting times on teenage driver crash rates. Preliminary results suggest that moving very early morning (7:30 a.m. or earlier) starting times later by an hour or more may reduce weekday crashes during the school year by 10%. HSRC plans more extensive work on this issue. For information, contact Rob Foss at foss@hsrc.unc.edu.

5. Effectiveness of GDL as implemented

Two new state-level evaluations and two multi-jurisdictional studies add to the evidence that GDL reduces teenage

crashes and injuries. Several other evaluations should be released in 2006.

5.1. Wisconsin

In September 2000, Wisconsin implemented a GDL law that extended the minimum learner's permit holding period to six months from seven days, required at least 30 hours of supervised practice driving, and added a 9-month intermediate stage with nighttime and passenger restrictions. Fohr, Layde, and Guse (2005) evaluated the law's effects. The per-population crash rate for 16-year-old drivers decreased 14% from 1999 to 2003 compared to the crash rate for drivers aged 25–59, and the injury crash rate decreased 16%. For 17-year-old drivers, both the overall and the injury crash rates decreased 6%; for 18-year-old drivers there was a small but not statistically significant decrease in both crash rates. There were substantially fewer crash-involved 16-year-old drivers carrying two or more teenage passengers in 2002 compared to 1999. There were very few crashes during the restricted hours of midnight to 5 a.m. in both years. There was no statistically significant change in the odds of a 16- or 17-year-old driver being at fault in a crash. From this latter result, the authors concluded that GDL's effect was due to reduced teenage driving through delayed licensure and reduced driving in risky situations through the intermediate license restrictions rather than to safer driving by teens.

McIntosh (2005) reported on knowledge and attitude surveys administered to 26 parent-teen pairs in the Madison, Wisconsin area in 2002 and 2003. Both parents and teens knew the GDL requirements very well. While 76% of parents supported the law, 70% of teens opposed it.

5.2. Texas

On January 1, 2002, Texas implemented a GDL law with a 6-month learner's permit holding period and a 6-month intermediate stage with nighttime (midnight to 5 a.m.) and passenger (no more than one under the age of 21) restrictions. Willis (2005) used FARS data to compare fatal crashes involving at least one 16-year-old driver during two-year periods before and after the law. The number of 16-year-olds who held a driver's license dropped from 43% in 2000 to 28% in 2003, a decrease of 34%. Fatal crashes involving 16-year-old drivers dropped 29%, from 103 in 2000 to 76 in 2003. The fatal crash involvement rate per licensed driver rose slightly. Crash circumstances, including time of day and number of passengers, were quite similar for the pre- and post-GDL fatal crashes. FARS data do not contain the date of licensure so cannot determine which of the post-GDL 16-year-old drivers were subject to the nighttime and passenger restrictions. Henk and Gette (2006) provide some evidence that these restrictions may not be well understood. In surveys of about 2,000 students

in two Texas high schools in both October 2002 and April 2003, one-third of the students were “not at all familiar” with GDL requirements and only one-sixth were “very familiar” with them.

5.3. Multi-jurisdiction studies and summaries

Dee, Grabowski, and Morrissey (2005) studied GDL effects on fatalities in a cross-section analysis using 1992–2002 FARS data from 48 states (excluding Alaska, Hawaii, and the District of Columbia) and controlling for other influences on teen drivers. They concluded that GDL, defined as any system with an intermediate licensing phase, reduced traffic fatalities among teenagers aged 15–17 by at least 5.6% and did not increase fatalities among older teens.

Morrissey, Grabowski, Dee, and Campbell (2006) carried these methods further and compared the effects of GDL programs of different strengths, as defined by IIHS and TIRF (2004). They concluded that “good” programs reduced traffic fatalities among drivers aged 15–17 by 19%. “Fair” programs reduced nighttime fatalities by 13% but had no effect on daytime fatalities. “Marginal” programs had no effect.

Mayhew et al. (2005) summarized five GDL evaluations in Canada and 13 in the United States, including tables comparing the crash reductions achieved in different jurisdictions.

McKnight (2006) summarized the history and previous evaluations of Maryland’s GDL, from its initial implementation in 1978 through revisions in 1985, 1998, and 2005.

Hartling and colleagues plan to update their Cochrane GDL review in late 2006 or 2007. For information, contact Lisa Hartling at lisa.hartling@ualberta.ca.

5.4. GDL evaluations in progress

California: PRG is re-analyzing California data to understand and reconcile the conflicting results of three recent California evaluations summarized in Hedlund and Compton (2005). The study, sponsored by IIHS, should be released in early 2006. For information, contact Susan Ferguson at sferguson@ihs.org.

Georgia: Emory University’s study, funded by the National Highway Traffic Safety Administration (NHTSA), should be released in early 2006. For information, contact Paul Tremont at Paul.Tremont@nhtsa.dot.gov.

North Carolina: The University of North Carolina School of Public Health and HSRC studied the effect of North Carolina’s GDL system on hospitalization rates and hospital charges for 16-year-old drivers. Preliminary results suggest that hospitalization rates and charges have decreased similarly to the previously-reported decrease in crash rates. Funded by CDC and State Farm Insurance, the study should be released in early 2006. For information, contact Lewis Margolis at lmargolia@email.unc.edu. HSRC is examining three other GDL questions using North

Carolina data: long-term effects of GDL, the effects of a passenger restriction, and whether GDL has produced crash reductions beyond those attributable to reduced or delayed licensure. For information, contact Rob Foss at foss@hsrc.unc.edu.

Ontario: TIRF’s evaluation is under final review by the sponsor, the Ontario Ministry of Transportation. For information, contact Dean Morin at deanm@trafficinjuryresearch.com.

Oregon: The NHTSA-sponsored study by the Center for Applied Research should be released in 2006. For information, contact Patricia Ellison-Potter at Patricia.Ellison-Potter@nhtsa.dot.gov.

Quebec: The Société de l’Assurance Automobile’s evaluation should be released in 2006. For information, contact Robert Simard at Robert.Simard@saaq.gouv.qc.ca.

United States: Johns Hopkins University, in a NHTSA-sponsored study, is evaluating GDL and its components nationwide using national crash databases. The study should be released in 2006. For information, contact Paul Tremont at Paul.Tremont@nhtsa.dot.gov.

United States: Johns Hopkins is conducting a second national study for the AAA Foundation for Traffic Safety (AAAFTS). The study will examine licensing rates and mileage driven to separate GDL’s effects on driving behavior and driving exposure. The study also will provide more information on the effects of individual GDL components. The study should be completed in 2006. For information, contact Scott Osberg at sosberg@aaafoundation.org.

Mayhew and colleagues at TIRF are comparing young drivers’ crash characteristics, conditions, and circumstances in two jurisdictions with substantially different GDL programs. A second study examines how a wide range of young drivers’ attitudes, motivations, and lifestyle variables relate to crash involvement, again in two jurisdictions with quite different GDL programs. A report on both studies, funded by AAAFTS, should be released in 2006. For information, contact Scott Osberg at sosberg@aaafoundation.org.

6. Operational features of GDL for parents and teens

Begg and colleagues in New Zealand will begin a large prospective cohort study in 2006. The study, described in last year’s update (Hedlund and Compton, 2005), will follow beginning drivers as they progress through the learner’s permit, intermediate, and full licensure stages. For information, contact Dorothy Begg at dorothy.begg@ipru.otago.ac.nz.

6.1. GDL acceptance

In 1998, California extended the learner’s permit holding period from one to six months, required at least 50 hours of

supervised practice, and introduced nighttime and passenger restrictions during the intermediate phase. Williams, Nelson, and Leaf (2002) surveyed parents and teens on their reactions to and compliance with the new requirements. Parents whose children were subject to the new GDL requirements supported them, with 79% strongly in favor and only 4% neutral or opposed. Over 80% of teenagers supported the extended learner's permit period and the 50-hour practice requirement and over 60% supported the nighttime driving restriction, but fewer than half supported the passenger restriction. Teens reported that they generally obeyed the nighttime restriction: 58% said they never drove after midnight in their first six months with an intermediate license, and another 27% drove 1–9 times. Compliance with the prohibition on passengers under the age of 20 was lower: only 20% reported complete compliance, while 60% violated the restriction at least 10 times (and 36% violated it at least weekly).

Blows, Ivers, and Chapman (2005) analyzed Australian print media coverage of proposals for nighttime and passenger restrictions. Fifty-two articles were published in a 12-week period, including news stories, opinion articles, editorials, and letters. The authors identified about 15 common arguments each from proponents and opponents and described how these arguments are positioned, or framed, into broader contexts such as individual values, problem significance, research evidence, and practicality.

6.2. GDL enforcement

Goodwin, Wells, Foss, and Williams (2005) studied the effects of well-publicized enforcement of GDL provisions, including nighttime and passenger restrictions and a safety belt use requirement, in one North Carolina county (400,000 population), with another county used as a comparison site. In addition to regular patrols, enforcement activities included checkpoints near high schools when students were dismissed and nighttime saturation patrols in locations popular among teenage drivers. Teenagers were aware of the increased enforcement. But both self-reported data and direct observations of young drivers showed only modest changes in compliance with GDL provisions.

A CDC-funded follow-up study is underway to test similar enforcement and publicity activities in other settings. For information, contact Arthur Goodwin at arthur_goodwin@unc.edu.

6.3. Parental roles and programs to assist parents and teens

Hartos, Simons-Morton, Beck, and Leaf (2005) studied whether GDL helps parents manage their beginning drivers by comparing survey results from Maryland, a GDL state, and Connecticut, a state without GDL. Maryland parents imposed stricter restrictions than Connecticut parents regarding teenage passengers, nighttime driving, and high-speed road driving.

Simons-Morton and colleagues provided additional evidence that the Checkpoints program helps parents manage their teens' driving (Simons-Morton, Hartos, Leaf, & Preusser, 2005, 2006a, 2006b). They surveyed parents of 1 teens before licensure and at 3, 6, and 12 months post-licensure. Checkpoints program parents and teens reported substantially stricter limits than comparison parents and teens through 3 months, and some effects through 12 months. A follow-up study is comparing the effectiveness of the Checkpoints program when delivered at the time of issuing the learner's permit or the intermediate license, assessing the effectiveness of communications on risk factors for parents and teens, and assessing the effectiveness of the Checkpoints parent-teen driving agreement. For information, contact Bruce Simons-Morton at mortonb@exchange.nih.gov.

In a series of papers, Beck, Hartos, and Simons-Morton (2005, in press-a, in press-b) are reporting the results of their studies of how agreement between parents and teens on parent-imposed driving restrictions affects teens' driving behavior.

Shope and colleagues at UMTRI, with funding from the National Institute of Child Health and Human Development and CDC, are implementing and evaluating an adapted version of the Checkpoints program in driver education classes in Michigan. Results should be available in 2006. For information, contact Jean Shope at jshope@umich.edu.

Hartos is studying the transition from parent-imposed to self-regulated safe driving practices among undergraduates at the University of North Carolina, Charlotte. For information, contact Jessica Hartos at jhartos@email.unc.edu.

Three programs to assist parents and beginning drivers have been released recently:

- *Driving Skills for Life*, developed by Ford and GHSA, emphasizes four skills: hazard recognition, vehicle handling, space management, and speed management (Ford and GHSA, 2003). The program's educational kit includes a video, teacher's guide, and brochure and the Web site contains on-line learning materials and parental tips and coaching guide. It has been sent to every public high school in the United States and the materials have reached an estimated 4 million teenagers and their parents.
- *Road Ready Teens*, developed by DaimlerChrysler together with AAA, MADD, and the National Safety Council, provides a parent's guide, a parent-teen contract, and a video game and Road Ready Reality Check quiz for teens (DaimlerChrysler, 2003). Bingham and Shope (2003) conducted a pilot evaluation of the video game using 19 teens, most of whom held learners permits. The teens played the game for 50 minutes and then participated in a focus group. The teens enjoyed the game and reported that it helped them understand driving risks but the game did not produce significant changes in their intentions to avoid risks.

- *Teen Driver: A Family Guide to Teen Driver Safety*, developed by the National Safety Council, provides information and advice to parents and teens on crash risks, how to develop a family plan and written agreement for beginning drivers, and GDL components and restrictions (National Safety Council [NSC], 2004). The University of North Carolina at Charlotte will evaluate the content and use of the Guide, strategies to implement it into new and existing driver safety programs, and how it helps families manage their teens' driving. For information on the CDC-funded project, contact Jessica Hartos at jhartos@email.uncc.edu.

The Allstate Foundation is developing a teenage driver safety program featuring teen participation and grassroots empowerment. The report announcing the program (Allstate Foundation, 2005) contains results from a national electronic survey of 1,000 teens on their driving attitudes and behavior and also discusses the implications on teenage driving of recent research on adolescent brain development.

Votta and MacKay (2005) studied an experimental family program, *I Promise*, consisting of a contract between parents and teen drivers and a window decal. Focus groups of young drivers, parents, and community members revealed substantial difficulties with the program's message, content, and language. Most families chose not to continue with the program after a pilot phase.

Henk and Fette (2006) studied the effects of a pilot program in high schools using a peer-to-peer approach to increase awareness among teenage drivers of common risk factors such as speeding, teenage passengers, and driving at night. Student awareness of several risk factors increased in the pilot high school, while there was no consistent change in the comparison school. The program is being refined and expanded to other Texas high schools. For information, contact Russell Henk at r-henk@tamu.edu.

7. Driver education and GDL

Research continues on the relationship between driver education and GDL and how to integrate them effectively.

7.1. Overviews

Bishop, Quinlan, Roeber, and Van Etten (2005) summarized the proceedings of the 2003 National Transportation Safety Board (NTSB) public forum on driver education and training. They provided brief histories of driver education and GDL in the United States. They summarized the views of forum participants from federal and state governments, driver education teachers, students, associations, and private companies. In August 2005, NTSB recommended that NHTSA and the United States Department of Education determine the best driver education curricula, training methods, and instructional tools; incorporate these into a

model curriculum; and determine how driver education should best be integrated with GDL (NTSB, 2005).

"Driver Education: The Path Ahead" was the subject of the 2005 midyear meeting of the Transportation Research Board (TRB) Operator Education and Regulation committee (ANB30). Papers written for the meeting discuss driver education content, instructional methods, student competency measures, and course evaluation. The papers will be published in 2006 as a TRB Circular, edited by Daniel Mayhew and James McKnight.

Lonero and Clinton (submitted for publication) of Northpor Associates are completing a thorough review of the driver education evaluation literature that identifies and assesses evaluation methods and data sources and provides recommendations. The report, funded by AAFTS, is scheduled for release in 2006. For information, contact Scott Osberg at sosberg@aaafoundation.org.

7.2. Driver education and crash risk

Zhao et al. (2006) investigated the impact of driver education on crash risk in the context of Ontario's GDL system. In Ontario, the minimum learner's permit holding period is reduced from 12 to 8 months for driver education graduates. Using self-report survey data from beginning drivers, and controlling for both months of licensure and kilometers of travel, the authors found that driver education reduced crash risk during the learner's permit phase and did not affect crash risk during the intermediate phase.

Maag and colleagues at the Université de Montréal have completed their comparison of crash rates for intermediate license drivers who have and have not taken driver education. The study may be obtained from Robert Simard at Robert.Simard@saag.gouv.qc.ca.

8. Other related research

8.1. GDL for motorcyclists

A few jurisdictions use some form of GDL for beginning motorcyclists. Several other states place some restrictions on motorcyclists with a learner's permit or those younger than a specified age. Mayhew and Simpson (2001) described GDL programs in Canada, California, Maryland, and South Dakota and summarized the effectiveness evidence from motorcycle GDL programs in Quebec and New Zealand. Baer, Cook, and Baldi (2005) reported that seven states had some form of GDL for motorcyclists in 2001. See Motorcycle Safety Foundation [MSF] (2002) for state motorcycle operator requirements and restrictions.

8.2. In-vehicle technology

Several in-vehicle technology systems that may reduce the frequency or severity of young drivers' crashes are being

tested or are currently available. Young, Regan, and Mitsopoulos (2004) used focus groups of young drivers aged 17–25 to evaluate the acceptability of these systems. The systems studied were warnings for driver fatigue, lane departure, following distance, and collision; speed monitoring that either warns of or limits excessive speed; alcohol interlocks and alcohol performance tests; safety belt reminders or interlocks; and electronic licensing. Acceptability was evaluated by considering each system's usefulness, effectiveness, usability, cost, and social acceptability. The only well-accepted systems were alcohol interlocks and safety belt reminders, and focus group drivers believed belt use reminders were unnecessary. The paper provides references to a few other studies of vehicle technology acceptability.

8.3. Simulator studies

TraumaLink Injury Research Center at The Children's Hospital of Philadelphia, in cooperation with the University of Iowa, is studying the usefulness of the National Advanced Driving Simulator for teen driver research. The NSF-funded project will examine on-road and simulated driving for teens and compare their performance to other age groups. The performance of high and low sensation seeking teens will also be explored while controlling for driving experience. Other TraumaLink projects are investigating the driving exposure of young drivers with teenage passengers and with child passengers, unlicensed and underage driving, and teen perceptions of driving risks, other health risk behaviors, and associated interventions. For information, contact Suzanne Hill at hillsu@email.chop.edu.

8.4. Teen driving newsletter

Erik Olsen at the National Institute of Child Health and Human Development, in cooperation with the TRB Operator Education and Regulation Committee, has started a teen driving email newsletter to report on ongoing and published research, conferences, and resources regarding teen drivers. The first issue may be found at http://www.teendrivinginfo.com/teen_driving_newsletter.htm.

9. Conclusions and next steps

Research on teenage driving issues in general and GDL in particular continues to grow. The 2004 and 2005 updates cited 37 and 52 new papers, respectively; this update cites 107. To assess what has been learned from this research and from recent experience with young driver programs, a symposium on teenage driving is planned for February 2007. The 2007 symposium and background papers will summarize the current state of knowledge on key GDL and teenage driver issues, including the role of parents, driver education, and new technology, and will discuss research

needs and action steps. For information on the symposium, contact Deborah Trombly of the National Safety Council at trombled@nsc.org. Readers are invited to send new and recent studies not included in any of the updates to Jim Hedlund at jhedlund@sprynet.com, who will pass them on to the 2007 symposium's organizers and background paper authors.

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Richard Compton is Director, Office of Research and Technology, National Highway Traffic Safety Administration, Washington, DC, where he has over 27 years of experience conducting and directing research in all behavioral traffic safety areas. He received his BA from the University of California-Santa Barbara and PhD in psychology from the University of Nebraska-Lincoln.

James Hedlund is Principal, Highway Safety North, Ithaca NY; previous work experience includes over 20 years at the National Highway Traffic Safety Administration. He received his BA from Cornell University and PhD in mathematics from the University of Michigan. He has published over 60 research studies and journal articles on behavioral traffic safety issues.

Ruth A. Shults is a senior epidemiologist at the Injury Center of the Centers for Disease Control and Prevention (CDC). She coordinates CDC's adolescent driving safety activities and systematic reviews of community-based interventions to reduce alcohol-impaired driving for the *Guide to Community Preventive Services*. She received her PhD in epidemiology from the University of North Carolina.


REPRESENTATIVE KEVIN MEYER

HOUSE DISTRICT 30

MEMORANDUM

DATE: January 16, 2008

TO: Representative Bob Lynn, Chairman
House State Affairs Committee

FROM: Representative Kevin Meyer 

RE: Hearing Request for House Bill 291 *Provisional Driver's License; Instruction*

Please schedule HB 291 *Provisional Driver's License; Instruction* for a hearing in the House State Affairs Committee at your earliest convenience.

HB 291 requires a person to complete an approved driver's education course before they can receive their provisional driver's license.

Included in this packet:

- HB 291 25-LS1196\E
- Sponsor Statement
- Backup Information
 - Alaska Highway Safety Office Powerpoint
 - Alaska Highway Safety Office Graphs
 - 2006-2007 Total Unbelted Fatalities by Age
 - 2006-2007 Total Intoxicated Fatalities by Age
 - Article: Graduated driver licensing and teenage driver research in 2006

Thank you for your consideration of this request. If you have any questions, please feel free to contact me or my staff, Mike Pawlowski at x4945.

FISCAL NOTE

STATE OF ALASKA
2008 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HB 291
 () Publish Date: _____

Identifier (file name): HB291-DOA-DMV-01-22-08 Dept. Affected: Administration
 Title: "Requiring completion of a driver's education program..." RDU: Division of Motor Vehicles
 Component: Motor Vehicles
 Sponsor: Rep. Meyer
 Requester: (H) STA Component Number: 2348

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information						
		FY 2009	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
OPERATING EXPENDITURES								
Personal Services								
Travel								
Contractual								
Supplies								
Equipment								
Land & Structures								
Grants & Claims								
Miscellaneous								
TOTAL OPERATING		0.0	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES	0.0							
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CHANGE IN REVENUES ()	0.0							
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FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts								
1003 GF Match								
1004 GF								
1005 GF/Program Receipts								
1037 C/Mental Health								
1156 Receipt Supported Services								
TOTAL		0.0	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2008) cost: _____

POSITIONS

Full-time								
Part-time								
Temporary								

ANALYSIS: (Attach a separate page if necessary)

Assuming the cost of completing a driver's education course is born by the applicant for a license, this bill does not have a financial impact on the Division of Motor Vehicles; therefore, the Division submits a zero fiscal note.

Prepared by: Whitney H. Brewster, Director
 Division: Motor Vehicles
 Approved by: Kevin Brooks, Deputy Commissioner
Department of Administration

Phone: 907-269-5574
 Date/Time: 1/22/08 12:00 PM
 Date: 1/22/2008

HB

293

Nancy Manly

From: Nancy Manly
Sent: Thursday, February 14, 2008 11:29 AM
To: Londi Ensor
Subject: HB 293 Fiscal Notes - Electronic Format

Attachments: HB293-GOV-OMB-01-28-08.pdf; HB293-LEG-COU-1-29-08.pdf



HB293-GOV-OMB-01-28-08.pdf (22...
HB293-LEG-COU-1-29-08.pdf (24 ...

Nancy Manly, Chief of Staff and
House State Affairs Committee Aide *for*
Representative Bob Lynn
House District 31
907-465-2794 Fax: 907-465-4316

Nancy Manly

From: Laurie Sica [Laurie_Sica@ci.juneau.ak.us]
Sent: Thursday, January 31, 2008 10:49 AM
To: Nancy Manly
Subject: FW: Legislative Move Poll Results

Nancy – not sure if you saw this on KTUU or not – they had an instant poll yesterday – these are the results.

From: Juneau Chamber [mailto:juneauchamber@gci.net]
Sent: Thursday, January 31, 2008 8:41 AM
To: Juneau Chamber
Subject: Legislative Move Poll Results

Thank you for voting!

Respondents think Juneau is just fine

by Channel 2 News Staff
Wednesday, Jan 30, 2008

ANCHORAGE, Alaska -- In a poll conducted Wednesday, Jan. 30, Channel 2 News asked viewers whether they thought the Legislature should be moved from Juneau.

A vast majority of respondents like the Capitol where it is.

Should the Legislature be moved out of Juneau?

Yes	20%
No	80%

All polls conducted by KTUU.com and Channel 2 News are unscientific.

Juneau Chamber of Commerce

Nancy Manly

From: Laurie Sica [Laurie_Sica@ci.juneau.ak.us]
Sent: Thursday, January 31, 2008 9:40 AM
To: Rep. John Coghill; Rep. Andrea Doll; Rep. Max Gruenberg; Rep. Kyle Johansen, Rep. Craig Johnson; Rep. Bob Lynn; Rep. Bob Roses
Cc: Rep. Kevin Meyer
Subject: City and Borough of Juneau support for Lynn Canal Highway
Attachments: RES2394-Support_Lynn_Canal_Highway.pdf

Greetings!

Regarding the recent House State Affairs Committee hearing of HB293 – "An Act relating to the location of the convening of the legislature in session and to the relocation of functions of state government..." Mayor Botelho and Assemblymember Sanford requested that you be provided with a recent resolution of the City and Borough of Juneau Assembly which indicates its support for the Lynn Canal Highway

Thank you for your consideration, and for your continued work for all Alaskans.

Laurie Sica, CMC
Municipal Clerk
City and Borough of Juneau, Alaska
155 S. Seward St.
Juneau, AK 99801
(907) 586-0216 phone
(907) 586-4552 fax
www.juneau.org

Presented by Assemblymember
Sanford
Introduced: 02/12/2007
Drafted by: J W Hartle

RESOLUTION OF THE CITY AND BOROUGH OF JUNEAU, ALASKA

Serial No. 2394

A Resolution in Support of the Lynn Canal Highway.

WHEREAS, the design of the first segment of the Lynn Canal Highway from Echo Cove to Sweeney Creek has been completed by the Department of Transportation and Public Facilities and is ready to go to construction as soon as the Corps of Engineers permit has been received; and

WHEREAS, all City and Borough reviews have been completed and approved to allow construction of the first segment of the Lynn Canal Highway; and

WHEREAS, the 2004 Southeast Alaska Transportation Plan has identified that the completion of the Lynn Canal Highway is a major component in helping resolve the many transportation issues in Southeast Alaska; and

WHEREAS, one of the 2004 published goals of the City and Borough Assembly is to "Support enhanced access, including road access," and it is the responsibility of Juneau, as Alaska's Capital City to improve access in every way possible, including electronic, air, marine, and road access; and

WHEREAS, both houses of the Twenty-fourth Alaska State Legislature, by resolution during the 2005 session, recognized the importance of road access to the Capital City; and

WHEREAS, all funding has been identified to complete the construction of the Lynn Canal Highway from Echo Cove to the Katzeihin River; and

WHEREAS, Juneau is the largest community, and only Capital City, on the North American continent not connected to the continental highway system; and

WHEREAS, the Assembly will continue to encourage the Department of Transportation and Public Facilities to meet the highest environmental standards and to mitigate any negative impacts that may result from this project; and

WHEREAS, the Alaska Marine Highway System still remains an important mode of surface transportation for Juneau and Southeast Alaska, and needs to continue to receive adequate State funding; and

WHEREAS, the Lynn Canal Highway will provide convenient and inexpensive vehicle access for the residents of Juneau, Haines, and Skagway, while reducing the State subsidy on the Alaska Marine Highway System.

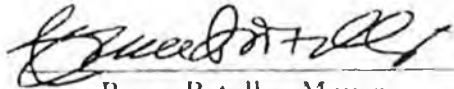
NOW, THEREFORE, BE IT RESOLVED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU, ALASKA:

Section 1. The City and Borough of Juneau continues to support the Department of Transportation and Public Facilities' effort to complete the construction of the Lynn Canal Highway.

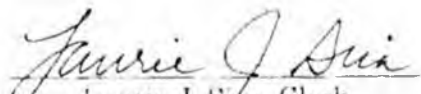
Section 2. The City and Borough considers the completion of the Lynn Canal Highway as a major project priority for the community of Juneau.

Section 3. Effective Date. This resolution shall be effective immediately upon adoption.

Adopted this 12th day of February, 2007.


Bruce Botelho, Mayor

Attest:


Laurie J. Ska, Clerk